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ON
MENSTRUATION

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DISEASES OF MENSTRUATION

AND

OVARIAN INFLAMMATION.

ON

DISEASES OF MENSTRUATION

AND

OVARIAN INFLAMMATION,

IN CONNEXION WITH

STERILITY, PELVIC TUMOURS, AND AFFECTIONS OF THE WOMB.

BY

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"Omne animal post coitum"

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PREFACE.

It is not without some degree of diffidence that I have ventured to add even a small volume to the number of those which overload medical shelves, for I feel that the flattering reception of an ephemeral production* offers no guarantee of similar success for a work addressed to the profession on the treatment of important diseases. Urged, however, by a conviction that books are not only useful to diffuse the knowledge of great discoveries, but also to connect those facts which, although sterile so long as they are left disjointed, assume importance when connectedly put together, I have here more methodically arranged, and more fully developed, views first expounded in a series of papers on the sub-acute forms of ovarian disease, which appeared in *The Lancet* in 1849.

I am further induced to do so, because those contributions were favourably noticed in various organs of the medical press,† and also on account of the gratifying concurrence in my views which has been spontaneously offered to me by many of my brethren engaged in practice.

Perhaps it would not be unbecoming for me to state, that

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* *The Serpentine* AS IT IS, *and* AS IT OUGHT TO BE; *and the Board of Health* AS IT IS, *and* AS IT OUGHT TO BE. 1848.

† *Edinburgh Monthly Journal*, 1849; Dr. Ranking's *Retrospect*, January and June, 1849; Braithwaite's *Retrospect*, January and June, 1849; *American Journal of Medical Science*, vols. 43 and 44; *London Journal of Medicine*, December, 1849.

whether as pupil or house-physician to the Paris hospitals, I have (from the beginning of my career) enjoyed the full advantages of the widest field for uterine investigations which can ever be afforded by a medical school; and that whilst practising in Paris and in various other capitals of Europe, I not only had abundant opportunities of testing the value of my views relative to diseases of menstruation, but also of strengthening them by the practice of those who so well represent our noble profession in each country.

I might even add, that since my return to England I have found abundant opportunities of confirming my peculiar views on the diseases of menstruation, while attending the numerous patients at the Farringdon General Dispensary and Lying-in Charity, and also those of the Paddington Free Dispensary for Diseases of Women and Children, to which institutions I am attached in the capacity of Physician.

My aim has been to perform, for the ovaries, the principal organs of menstruation, what has been successfully done for other organs by many eminent men, and I feel assured, that although some of my deductions may be contested, my practice will be admitted by all to be indubitably safe, and necessarily destined to diminish the number and intensity of female complaints.

I can lay claim, *unfortunately*, to no discoveries; but from an acquaintance with the literature of that branch of the profession to which I have devoted my chief attention, I feel justified in affirming, that in no other work will the reader find so complete an account of the various ways in which sterility is produced by the action of inflammation on the ovarian tissues, of the great importance of ovarian peritonitis as a cause of disordered menstruation, or of the influence of ovarian inflammation in the production of uterine disease—facts forcibly exemplified and proved to be, not mere conventional possibilities, but events of frequent occurrence.

I must also observe, in reference to the numerous cases with

which I have enriched my work, that I have given them more with a view of illustrating, than of establishing, each particular point of ovarian pathology. I have therefore taken from my own case-book only those select cases which bear forcibly on the subject, borrowing from authors and contemporary observers, facts, rendered much more valuable by their not having been collected under the influence of the views which they will be found so admirably to exemplify. If I have derived my cases more from foreign than from British practitioners, it is simply because Continental obstetricians, having been the first to investigate scrupulously the diseased organs of generation by the combined assistance of the touch and of the eye, have been able in many instances to detect the hidden causes of those diseases which, until late years, were only guessed at, and could only be treated symptomatically.

As a fitting introduction to this work, I intended to prefix an essay on the natural history of woman, but finding the matter to grow rapidly under my hands, and the vast importance of the undertaking becoming every day more perceptible, I have, for a time, desisted from the accomplishment of what must be considered the only rational introduction to any treatise on the diseases of women.

In noticing the many deficiencies of this work, the reader will also remember that it is the first systematic attempt to do, for the principal organs of generation in women, what has now been done for every other important organ of the body, and that, considering the rapid progress which has lately been made in ovarian physiology, it cannot be wrong if some one should seek to give to the pathology of the ovaries a development which would be greater and more satisfactory if the labourer were better able to accomplish his self-imposed task.

I am fully aware that by the very title of the work I lay myself open to criticism. It will doubtless be said that it should have been "Diseases of the Organs of Menstruation," as we say diseases of the "organs of respiration;" but rath-

er than prejudge a question, I prefer being censured for an imperfect, although received and pretty well understood, phraseology.

I cannot record the progress of ovarian physiology without testifying my admiration for the illustrious Regnerus de Graaff, who, nearly two centuries since, originated a movement which has only been followed up within the last few years. Can I better conclude this address than by borrowing the words in which he ends the preface to his immortal work?*

"*Vale itaque amice, Lector, atque conatus meos non sine labore et sumptu adornatos, tibique gratis oblatos, candido et benevolo (quo illos conscripsimus) animo, castoque pervolve.*"

EDWARD JOHN TILT.

8, YORK STREET, PORTMAN SQUARE.
March 25th, 1850.

* Regneri de Graaff *De Mulierum Organis Generationi Inservientibus Tractatus Novus: Demonstrans Tum Homines et Animalia cætera omnia, quæ Vivipara dicuntur, haud minus quàm Ovipara ab Ovo originem ducere. Ad Cosmum* III *Magnum Etruriæ Ducem.*— Lugduni Batav. Ex Officina Hackiana, 1672.

INTRODUCTION.

"An introduction, like unto a ladder, should lead us step by by step to the main object of our research."

QUARLES' *Enchiridion.*

QUESTION I.—Why is medicine so uncertain? Notwithstanding the immense progress which has been made within the last fifty years in every branch of medicine, we must still admit, to a marked extent, the fact of its uncertainty; and it seems to us that the want of precision in medical language is one of the principal causes of this uncertainty. Why should there be such obscurity in our nomenclature, since it is in our power to give a definite value to every term we employ? Perhaps we attach too little importance to words, considering them as the mere garment of our ideas, to be assumed or cast off, as we like, and when we like. But are not (names we speak of those which embody doctrines) the offspring of the mind, participating in its power, inheriting its genius? Like our children, when they are conceived, incubated,

and once fairly brought forth, must they not be considered as living things, impregnated with a vital principle, endowed with human power ?

They were meant to be the mere symbols of man's conception of things, but soon they assume the place, and usurp the potency, of tangible existence ; it is by their means that man acquires a kind of terrestrial immortality, for by them he extends his sway over future generations. During the prolonged lifetime of such words, they strenuously oppose all new discoveries, because they are at a loss to express them ; and even when the doctrines they once effectually supported are defunct—ghosts of what they were formerly, they still are able, either to give rise to interminable discussions, or else to weigh with undue force on the thoughts and actions of our race. It is in the indolence of human nature to be led by any phantom-power that will but take the trouble of walking first. In religion, in politics, in science, are we not led by names ? they show the way, and on we follow, with blind impetuosity, as the soldier does his flag—it may lead to truth, or to error ; to glory, or to destruction ?

It appears from the history of medicine, that words and names have always governed practice, and they will no doubt always augment, or diminish, our bills of mortality. At one time, *vitalism* was the ruling *word*, and the patient was often left to struggle on as he could against disease, while the

physician was philosophizing on the autocracy of Nature. At another period, the profession hoisted a yellow (not the quarantine) flag, and *bile* was the prevailing *word*. The art of medicine dwindled into the art of exhibiting emetics, and illustrious doctors talked of the human body as if it only consisted of one gigantic liver.

What have we not seen lately in a neighbouring country, under the influence of the word *inflammation?* Almost every disease was considered inflammatory. Patients were bled to the verge of exsanguinification. Drs. Sangrado rejoiced in the deadly paleness of their patients' features, and when the relatives complained of their interminable convalescence, they were quietly told that it was in the nature of the Divine infliction, and not the result of a most pernicious treatment. Such, in medicine, has been the power of mere words, and when such words have become tenantless of their former spirit, they still meet us at the patient's bedside, where an old crone often thinks she knows as much about the hot and cold things as Galen himself, and can theorize as well about peccant humours as the ultra-humorists of the middle ages, or exhibit an aptitude of deducing every disease from inflammation, which would have even fascinated Broussais. At the bedside, then, we have not only to guard against the exaggerated influence of the *words* under which we ourselves have been

educated, but also against the influence of those symbols of old doctrines tumbled from their high estate, into the brains of a nurse. The analytic spirit of this age, however, does not so willingly bow to words, and we now ask them for the title-deeds of the power they assume. In medicine, the general terms under which superficial knowledge hopes to find a comfortable shield, are taken to pieces, and we love to grapple with those assemblages of symptoms which have long been called by common names, and to submit them to a cautious analysis, in order to discover, if possible, to what organ of the human body they may be specially referred, and through which their treatment may be the most successfully directed.

The diseases of most important organs of the body have been specially studied, and severely analysed; and when we merely assert that a patient is suffering from disease of the head or of the chest, or from morbus cordi, we no longer think to impose on a fellow practitioner a very clear idea of the case, or of the extent of our own information. It seems to us necessary, that what has been effectually done for other diseases should likewise be done for the diseases of menstruation, distinguishing the different meanings of the terms by which they are described, in the hope that a greater precision in definition may lead, not only to better practice, but also to the prevention of a great proportion of those complaints to which women are liable.

QUESTION II.—What, then, are the principal diseases of menstruation ?

AMENORRHŒA, or suppressed menstruation;
DYSMENORRHŒA, or painful menstruation;
MENORRHAGIA, or profuse menstruation;
LEUCORRHŒA, or various discharges; and
HYSTERIA.

We shall briefly examine into the meaning of these substantives.

What does AMENORRHŒA imply ?

Absence of organs of ovulation, their destruction, their chlorotic arrest of development.
Sub-acute or acute ovaritis;
Or it may represent the inflammation, or the obliteration, of the Fallopian tubes;
Undersized womb;
Inflammation of the womb;
Morbid stricture, or obliteration of the neck of the womb;
Ulceration of the neck of the womb (*Dr. H. Bennet*);
Its induration (*J. P. Frank*);
Retroversion of the womb (*Dr. Rigby*);
Or the organs of reproduction may be perfect, but, under the influences of various acute and chronic diseases, the menstrual flow may be impeded or suppressed.

This word Amenorrhœa, which answers to so many conditions, can, then, be no longer admitted as a substantive term. It means so much that it means nothing.

But what does DYSMENORRHŒA indicate?

Sub-acute ovaritis;
Ovarian peritonitis;
Effusion of the ovum and menstrual blood into the peritonæum;
A neuralgic ovarian affection;
Tubal inflammation and partial obstruction, with flow of blood into the peritonæum;
An undersized womb;
Deviations of the womb;
Inflammation of its body, or of the inner surface, producing false membranes;
Stricture of the neck of the womb;
Its induration;
Ulceration of the neck of the womb;
Cancerous affections of the neck of the womb;
Coarctation of the vagina;
And constitutional diseases, such as a rheumatic or gouty habit (*Rigby*).

Dysmenorrhœa, as the name of a disease, ought therefore to be expunged from every medical work, for it has no definite meaning, and must lead to hazardous practice.

What does MENORRHAGIA represent?

Sub-acute ovaritis;
A neuralgic affection of the ovaries;
Uterine catarrh;
Cancerous affection of the womb;

Ulceration of the neck of the womb ;
Retroversion of the womb ;
Irritable uterus.

Menorrhagia, likewise, should be discarded as one of those words which mightily entangle and pervert a true judgment.

But let us now take LEUCORRHŒA, which stands for—Hypersecretion of the mucous follicles ;
Chronic catarrh of the Fallopian tubes—(*Rokitansky*) ;
Uterine catarrh ;
Ulceration of the neck of the womb ;
Various inflammations of the vagina or external organs.

Again too many different significations to be adequately represented by one word.

The words AMENORRHŒA, DYSMENORRHŒA, MENORRHAGIA, and LEUCORRHŒA, then, cannot be received as things substantive, because vague and injudicious treatment must spring from vague and general terms in medicine. Such words can only be applied in an adjective sense, to point out the different morbid conditions of the organs of generation, which produce in so many different ways the diseases of menstruation.

We presume to protest against names imposed by high authorities, because under their pernicious influence we have too often seen women doomed

to long years of continued suffering; sometimes receiving no sort of treatment, at other times treated in a way which would disgrace those who dispense nostrums to barbarous tribes. The continued study of menstruation, and everything connected with that function, has convinced us that there is no reason why the flower of woman's lifetime should remain blighted by intolerable misery, if those organs which stamp the physical character of woman were studied as minutely as the other organs of the body, and if the diseases of each particular portion of the organs of reproduction were investigated with adequate perseverance.

Such maladies have been the engrossing study of our life. Wherever we have resided, whether in the Paris hospitals, or in those of Germany or Italy, or in the East, our uppermost thought has been to investigate thoroughly the phenomena of the diseases of menstruation, and at some future day we trust to show that our efforts have not been destitute of good and useful results.

At present we do not intend to treat of all the organic lesions enumerated as causes of diseased menstruation, but to confine ourselves to the consideration of the organic diseases by which we consider them to be very frequently produced—inflammation of the ovaries and oviducts. But before inquiring into the diseases of menstruation, we must glance at the function itself—although the

boundaries we have proposed do not permit us to go deeply into the subject.

QUESTION III.—What is Menstruation?

A sero-sanguinolent secretion propelled by an ovarian influence from all or different parts of the generative intestine, and principally from the womb. It is a natural function peculiar to women; and if we estimate the reproductive portion of the lifetime of woman at thirty years, and admit that she menstruates during eight days in every month, it appears that she is subject to this natural infirmity for about seven out of these thirty years. If we, moreover, take into consideration even the most favourable results of pregnancy—child-bearing and lactation, we obtain an insight to a just appreciation of the influence of the organs of generation on the destiny of woman. But when we bear in mind that all these physiological functions are subject to multitudinous morbid derangements, we are obliged to own, with Van Helmont, that "propter uterum solum mulier est quod est;" and with a still greater authority, Hippocrates, "Propter uterum, mulier tota morbus est."*

* But in this day we must accept these axioms with some qualification, and not be wholly led away by words, which, as we have already said, must be regarded as the mere symbols of ideas. By Hippocrates and Van Helmont, and nearly all their successors down to the present day, the *uterus* has been regarded as the fundamental portion of the female generative system—a distinction which in reality belongs to the ovaries.

Menstruation varies according as it is studied in the inhabitants of northern or tropical climates, or of those which enjoy a medium temperature: thus in very cold countries, almost all women first menstruate after the fourteenth year; while in hot countries, almost all women first menstruate before the fourteenth year. In this and in neighbouring countries, the period of first menstruation is pretty equally spread over the four years which precede and follow the fourteenth year; and we therefore consider it to be the general mean age of first menstruation. The difference in the time of first menstruation is to be attributed to the effect of temperature, for it cannot be accounted for by any greater libidinousness of the inhabitants of a southern or of an eastern climate. The warmth of man's temperament is quite independent of climatorial influences, for our Arctic travellers have convinced us, that, in the midst of ice which never thaws, many of the Esquimaux tribes live in a state of licentiousness which cannot be surpassed by that of the sunburnt natives of India.

Without venturing to explain why menstruation

We shall hereafter take occasion to remark that the uterus is an appendage to the ovaries, as, in an analogous manner, the bladder is to the kidneys. Still the presence of an uterus physiologically implies the presence of ovaries—and in so far, but no further—may we give implicit assent to the dicta of Hippocrates and Van Helmont.

a natural function, should entail so much disease, we shall lay before the reader the statistical data whereby Dr. Briérre de Boismont has enabled us to appreciate the frequency of the symptoms of menstruation. Thus, with regard to its first appearance, out of 645 women, carefully questioned, in 357 the menstrual discharge appeared without previous symptoms, and in 228 its first appearance was preceded by pain and other symptoms. We give the figures as we find them. But of 654 women, in whom the menstrual function was fully established, in 496 each monthly return was accompanied by symptoms, in 360 cases the symptoms were both general and local, in 136 there were general symptoms alone, — whence we may infer, that in only 158 females out of 654, or in about 25 per cent., were the menstrual periods unattended by precursory signs and concomitant painful symptoms.

The frequency of diseases of menstruation also varies with climate, and as a result of investigations not yet concluded, we may state that they are infinitely greater in countries of medium temperature subjected to sudden transitions, than in those countries in which a permanency of intense cold or heat predominates. But if climate increases the frequency of diseases of menstruation, civilization does so to a far greater extent. Little known to the women of barbarous tribes, whether inhabiting glacial or torrid climes; more frequent amongst our

women of the poorer orders, although hardened by labour, by privations, and by exposure to the elements; they are mostly found amongst the spoiled children of fortune, who are brought up in the lap of luxury. The susceptibility of the skin and mucous membrane is increased to the utmost by the heat-generating influences of over-feeding and over-clothing, while the nervous system and the organs of reproduction are over-excited by the prurient incitements of passion-stirring pictures, statues, music, novels, and theatres. It might have been supposed, that the dangers incidental to menstruation, to pregnancy, and to childbirth, when added to those common to both sexes, would have considerably increased the mortality among women; but all such risks are amply compensated by those which men have to encounter on the battle-field, or wherever, by land or by water, their laborious enterprise exposes them to accidents; and although the number of men born always surpasses that of women, we still find that there is ever a greater number of women in the world than men. The vital tenacity of women is also superior to that of men, and is well proved by the greater facility with which they bear deprivation of food, or submit to bodily torture and anguish of mind. It is still more practically illustrated by the Registrar General's reports, which show the less per-centage of females than of males who die of diseases out of

the same given number of each sex. This rule, which, with some slight oscillations, holds good throughout life, cannot be explained by the special influence of menstruation, because its action precedes the establishment of this function, and after the change of life is still proved to be in full activity, by the far greater number of women than of men who attain to longevity. But whatever may be the cause, it seems to us a providential arrangement; for as amongst the bees there is a large number of imperfectly developed females, called labourers, nurses, and, improperly, neuters, which are indispensable to the well-being and multiplication of the humming communities; so with us, that large proportion of women whose organs of reproduction always remain passive, are nevertheless most useful to the welfare and multiplication of the human race, to whose many wants they minister, and whose weaknesses they strengthen, their milder influence tempering and softening the harsher asperities of the stronger sex. We have thus spoken of menstruation without mentioning by what theory we explain its phenomena. A theory is an intellectual staircase; and as some kind of staircase is necessary to obtain a knowledge of the interior of a building, to make use of its appurtenances, so must we have some kind of theory in order to catalogue and turn to account the innumerable facts of modern science; and as, moreover, we do

educated, but also against the influence of those symbols of old doctrines tumbled from their high estate, into the brains of a nurse. The analytic spirit of this age, however, does not so willingly bow to words, and we now ask them for the title-deeds of the power they assume. In medicine, the general terms under which superficial knowledge hopes to find a comfortable shield, are taken to pieces, and we love to grapple with those assemblages of symptoms which have long been called by common names, and to submit them to a cautious analysis, in order to discover, if possible, to what organ of the human body they may be specially referred, and through which their treatment may be the most successfully directed.

The diseases of most important organs of the body have been specially studied, and severely analysed; and when we merely assert that a patient is suffering from disease of the head or of the chest, or from morbus cordi, we no longer think to impose on a fellow practitioner a very clear idea of the case, or of the extent of our own information. It seems to us necessary, that what has been effectually done for other diseases should likewise be done for the diseases of menstruation, distinguishing the different meanings of the terms by which they are described, in the hope that a greater precision in definition may lead, not only to better practice, but also to the prevention of a great proportion of those complaints to which women are liable.

QUESTION IV.—What are the Organs of Menstruation ?

If the older physicians were so eminent in the practice of their profession, it is because they were no less versed in philosophy than in physic. Logic will doubtless suggest that no organ can derive its power of action from any other organ, the appearance of which is posterior to its own, whether in the development of the embryo, or in the such cessive complication of organs in the zoological series ; we may infer, then, that the ovaries which appear first, impart unto the uterus its special power of action. It will likewise be recognised, that every organ receives its stimulus from that which follows it in the successive evolution of our organs, as seen in the development of the embryo. If so, it is the uterus which stimulates the ovaries to increased action. Moreover, in any series of organs constituting an apparatus, the middle organ is always placed between an organ anterior to itself, from which it derives its *ratio standi*, its final end,—and a third organ, whose development is posterior to its own, and from which it derives its appropriate stimulus. The uterus, therefore, derives its stimulus from the external organs of generation, and the reason of its existence from the ovaries. The relative importance of the organs of generation being clearly estabiished, we shall briefly observe, with respect to the ovaries, that throughout the

scale of creation they are the ultima ratio of generation. In woman it has been amply shown, by the successful experiments of modern observers, that the ovaria are the essential organs of reproduction, and that in them originate the greater proportion of those sympathies which have been so long called uterine; and furthermore, that the development of the pelvis, of the uterine system, and of the mammæ, the function of menstruation, and all the peculiarities of the human female, depend upon the ovaria. These may consequently be considered the essential organs of the generative system, for they are always present, whatever form the organization may assume. We may, then, admit that the ovaria not only supply that *pars ventris* (as the Roman jurists used to say) which, with the stimulus of the seminal fluid, can be developed into an individual similar to its progenitors, but impel the female to seek the satisfaction of those sexual desires which ensure the continuance of our race. It is even asserted by Dr. Tyler Smith, in his valuable *Lectures on Midwifery*, that the ovaria incite the uterus to the reflex motor actions, which are necessary to the expulsion of the impregnated ovule, when it has attained the fulness of fœtal growth; phenomena which may well surprise us, when we consider their vast importance, as compared to the apparent insignificance of the ovaria in point of volume, and of organization.

The ovaries are also the organs of menstruation, for if they have not existed, though the uterus may be present, it cannot secrete the menstrual fluid. We purposely say, if they have not existed; for when once they have determined their periodical discharge, their destruction by disease, or their removal, has, in some rare instances, been still followed by a periodical flow. These "testes muliebrum" have evidently the same influence over the development of woman as the testes have over that of man, and their absence or destruction by disease, or by artificial means, to serve the licentious propensities of the Eastern despots of antiquity, or of the present day,* is followed by the arrest of that characteristic luxuriance of form which we admire in women, and by their assuming the drier texture, the harder outline, and the angular harshness of men.

If, then, it be established that the ovaries govern menstruation, it is reasonable to study the disorders of menstruation in connexion with the diseases of those organs, so that we may have some

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* Some very curious details will be found in a small work published under the title of "Fragment d'un Voyage dans les Provinces intérieurs de l'Inde en 1841, par le Dr. G. Roberts, Membre de la Société Orientale de Paris, Charge par M. le Ministre de l'Instruction Publique d'une Mission dans l'Asie centrale, publié par la Société Orientale. Paris, 1843."

connecting link in the investigation of these important diseases, and be able, in many instances, to direct our treatment to that organ which all recognise as the fountain-head of menstruation; and as we ascribe to inflammation so great an influence in disturbing the functions of the ovaries as to produce diseases of menstruation, we must question ourselves respecting the occurrence and phenomena represented by this most important word.

QUESTION V.—What is Inflammation?

The intimate nature of things being for ever hidden from our comprehension, we can merely study the conditions and phenomena of inflammation; and the researches of Hunter, Broussais, Williams, Addison, and others, have shown us that it is the great secondary cause of innumerable diseases. In the whole range of pathological causes, none is equally prolific in morbid effects, whether acting independently of any other influence, or associating with some other cause to destroy the human frame. Far from maintaining, however, that in the production of many of the structural lesions inflammation is all-powerful, we merely assign to it a secondary power, and say, that when it supervenes in individuals of a tuberculous or cancerous diathesis, it cries out to the *ignotum quid* of cancer or tubercle circulating in the fluids, "Come here and settle down."

If we were allowed the use of a comparison to explain the proper part to be ascribed to the original structure of the organ, to the diathesis or peculiar condition of the fluids, and to inflammation, in the building up of morbid growths, we should say, that the structure of the organ supplies the warp and woof of the morbid growth—that the diathesis procures the rough materials,—while that perverted vital principle called inflammation is the powerful agent which works up the rough material into the tissue of the growth. It may be thought that we assign to the fluids an exaggerated importance; but if we admit the development of our healthy tissues from cells, and their degradation as the cause of morbid growths, we merely express an anatomical fact, somewhat more hidden than those which were recognised before the application of the microscope to the study of morbid anatomy. There must be something beyond the cell—there must be the fluids from which the cell is elaborated, and into which it will be dissolved; so that we are brought back to the fluids—to the universal pabulum, the blood, in which encephaloid and tuberculous matters have been found by Professors Andral and Forget; and to animate this *skeleton cell*, must not we invoke some mysterious principle of life, independent of the cell, but working through it as with an instrument? Is not a perturbation of this vital agent the most probable ultimate

cause of inflammation? Laying aside, however, its ultimate cause, we make a simple statement of facts when we assert that inflammation is the keystone of pathology. Those especially who take up the study of the diseases of one system of organs, invariably come to this conclusion; and the writers whose capacious minds permit them to digest equally well the whole range of nosology, when not blinded by some pet theory, arrive at a similar result. We have been led to profess the self-same creed; and while asking pardon for the utterance of such a truism as that inflammation is the keystone of ovarian pathology, we no more pretend that it explains the whole of it, or even all the phenomena of diseases of menstruation, than we do that it is the *ratio sufficiens* of tubercle or cancer. It is, at least, consoling to the practitioner to know, that if inflammation is the most frequent cause of disease, it is also the one with which we are the most acquainted,—which is the most amenable to our treatment; and we feel convinced, that the admission of the inflammatory origin of most diseases of menstruation, and the more frequent use of antiphlogistics which that admission will command, would diminish their frequency as well as their intensity.

And now it would remain for us to inquire into the "modus operandi" by which inflammation, reacting on the ovaries, produces diseases of menstruation.

In answer to this sixth question the following pages have been written; and having thus conducted the reader, step by step, into the chapters which follow, it remains for him to judge whether, on rising from their perusal, he will admit himself satisfied with our solution of the question.

PROLEGOMENON.

"Of all the organs of the human frame, none are so often affected by disease as the ovaries. Suppressed menstruation, which is a frequent cause of sterility, can generally be traced to disease of the ovaries."—*Neumann—Clinic.*

"Our ignorance of ovarian inflammation is one of the strongest proofs that can be given of the little attention uterine pathology has received."—*British and Foreign Medical and Surgical Review January*, 1850.

ADMITTING to the fullest extent the assertions of the eminent obstetricians from whose writings we have borrowed our epigraphs, we believe that no disease is more common than, though so little understood as, ovaritis.

In the opinion of almost all those who have alluded to the subject in their writings, as well as in that of the generality of practitioners, ovaritis is a disease only to be met with in the puerperal state, forming one of the varieties of pelvic tumours, and consisting of an extensive swelling and suppuration of the ova-

ries, attended by alarming symptoms of puerperal fever. The idiopathic form of acute ovaritis has lately been described by others, who have brought forward cases to prove that, independently of the puerperal state, the ovaries may be acutely inflamed, become the seat of extensive suppuration, and thus constitute a species of pelvic tumours. It is also admitted (*pro formâ*) by some authors, that the ovaries may be affected with chronic inflammation, but they dispose of the complaint in a very hurried manner, and so obscurely describe it, as not to allow the student to extract any precise information from what he may read.

Such is a brief epitome of what is generally admitted respecting ovaritis; but as the study of phthisis is not merely confined to the consideration of those caverns formed by the melting away of tubercular masses; and as the idea we have of pneumonia is not entirely connected with the state of the pulmonary tissues in the last stage of the complaint; we may safely admit that there are other forms of ovarian inflammation besides the acute form —whether idiopathic or puerperal—described by authors. That form of ovaritis has attracted most attention because it is the most striking; but it will not be difficult to prove that it is the most uncommon, while the sub-acute variety, whether alone or confounded with various diseases, is of very frequent occurrence. That the ovarian, which is the *punctum*

saliens of animated matter, and the mysterious source whence it has pleased the Almighty to let flow, through time, the stream of human life, should not be frequently subject to disease would be, at least, singular. It is likewise improbable that the eccentricities of civilization, which have rendered the different organs of our frame so prone to disease, should not have also increased the tendency to inflammation in those glands which have for their proper function to furnish that which is to be gifted with independent life ; and particularly so, when we bear in mind by what an ingenious system of contrivances we do our best to create and pamper those feelings of sexual excitement which have for their final cause the production of the living ovule by the ovarium.

Now, if we turn from what may appear to some, unnecessary speculations, to practical investigation, we shall often find authors owning how imperfect is their knowledge of ovarian pathology, and expressing their belief in the existence of other forms of ovaritis than those which they were able to divine at the bedside of the patient, but which they could not bring clearly within their mental vision, because the symptoms of these forms of ovaritis were obscured by those of diseases of the neighbouring organs.

Without appealing to the works of the older writers, though we are far from despising authorities with which we are less conversant than with the book of

Nature, we will merely quote a few modern authors, in proof that they are fully aware of the existence of something more than they can describe, and that they hint at, and even admit, the frequency of such forms of complaint. Thus, in his 46th letter, Morgagni says:—"If I wished to enumerate all the lesions of the ovaries and oviducts which I have seen in my dissections, this letter would be the longest of all."

Kruger, in his valuable thesis (*Pathologia Ovariorum*, Göttingen, 1782), exclaims, "How frequently have authors noticed the numerous anatomico-pathological lesions of the ovaries! But of what avails such information, if they do not describe their cause and symptoms?"

The most popular of our writers on diseases of women, says—"We can have no hesitation in believing that the ovaria and the Fallopian tubes must, for many years of female life, be the common seats of disease; and probably some of the most obscure cases occurring in medical practice belong to chronic ovaritis, especially where we cannot trace the symptoms to an acute attack." Again, Dr. Ashwell says—"Dull and heavy pains in the region of the ovary, lasting for months, are the consequence of chronic inflammation of the ovaries; I mention the circumstance because they are too often regarded as neuralgic, and treated accordingly; painful menstruation and sterility being their results." And again:

"Of all the organs of the human body, scarcely any seem so prone either to functional or organic disease, as the ovaries; for I can with truth say that I have rarely, when examining these important organs after death, found them entirely healthy." (Ashwell, p. 6, third edition.) Dr. Robert Lee tells us that "the adhesions between the ovaria and the Fallopian tubes being so frequently met with in examining the bodies of women of different ages and conditions, prove that slight attacks of inflammation of the peritonæal coat of the ovaria are not of rare occurrence, and that their presence is seldom discovered during life." In his work on puerperal inflammation he likewise truly asserts, "that there is no doubt that the injury of the ovaries or of the texture connecting them with the Fallopian tubes, is by far the most frequent change in the bodies of women carried off by puerperal fever." And again, he remarks, that in the many cases of disordered menstruation, chlorosis, and hysteria, which we have observed, the symptoms have been clearly referable to certain morbid states of the uterine appendages, and decided benefit has resulted from the application of those local remedies which were employed with the view of subduing the irritation, the congestion, or the inflammation which appeared to be present in these parts of the uterine system." (*Cyclopædia of Practical Medicine.*)

These assertions are amply confirmed by J. P.

Frank, a man of European celebrity, who, when giving an account of his travels in this country in 1806, mentions that Dr. Cheston, of Gloucester, looked upon menstrual colics as produced by inflammation of the ovaries, and that on his return to Wilna he (Frank) attacked such cases by an antiphlogistic plan of treatment, and with much greater success than had formerly attended the exhibition of stimuli. But nothing can more forcibly prove either the difficulty of diagnosis of ovaritis, or the little attention paid to its diagnosis, or, in other words, the ignorance of this form of disease, than the fact that, out of thirty-seven cases of the puerperal form observed by Madame Boivin and Dugès in the years 1819—1820, only *two* were correctly diagnosed during life. The existence of ovaritis in the other thirty-five cases was subsequently proved by post-mortem examination, and doubtless the same disease has escaped detection in many of those who have recovered from puerperal fever.

Having thus indicated, from the testimony of some of our best authorities on the subject, how very frequent are certain forms of ovarian inflammation, which differ from those described, we will in a few words suggest why they have passed unnoticed.

Losing sight altogether of physiological considerations, the diminutive size of the ovaria has caused them to be seldom considered as the start-

ing points of disease, while their being so deeply imbedded in the pelvic cavity is a sufficient reason for their affections not being detected by the ordinary modes of exploration. But we must not forget, that in the unimpregnated state the ovaria are the centre of the sexual system, and that the sum of action in the other organs of that system, the uterus and the mammæ, is then destined to keep up the periodic maturation and dehiscence of ovules from the ovaria. The similarity of the symptoms of sub-acute ovaritis, and of certain forms of metritis, is also a reason that ovaritis has often been completely overlooked, the symptoms being attributed to diseases of what has been heretofore considered the most important organ of the female pelvis. A still more important cause of our ignorance of the milder forms of ovarian inflammation may be deduced from the physiological functions of the ovaria. The ovary is the organ which, by its physiological impulse, excites the menstrual flow. Healthy menstruation is dependent on the healthy structure of the ovaria; for the phenomena of painful menstruation, when carefully analyzed, may be often found to embrace the symptoms of sub-acute ovarian inflammation. Now as menstruation is a natural process, it is supposed by women to be a part of those inevitable evils to which human flesh is heir, and that however much attended by suffering, it is useless for them to seek redress at

our hands. Thus we are, generally speaking, not called in, or are merely consulted incidentally, when the catamenia are accompanied by an amount of pain and other symptoms really sufficient to give them all the importance of a disease. Can it, then, be a source of wonder that we are little acquainted with all the forms of ovarian disease, when we are denied the possibility of studying them in their origin, in those deep-laid foundations of hysterical attacks, of a sterility which at first might have been prevented, or of those enormous tumours, for the existence of which we have afterwards so much difficulty in discovering a cause?—tumours which usurp the place of all the viscera of the pelvis and abdomen; nay, even of the chest, and, generally speaking, leave women no other alternative than that of leading a life of misery, or of undergoing operations too often followed by speedy dissolution.

If we dwell on this subject, it is to impress on the mind of all the necessity of paying more attention to the phenomena of what are called painful and difficult menstruation, menstrual colic, and that Protean female infirmity, named hysteria, as well as to point out the necessity of taking into consideration, not only the vicious preponderance of those nervous forces which give life and impulse to our organs, and determine the quantity and quality of the blood—their liquid pabulum; but

also, as far as possible, the exact local state of those small, yet most important organs, whose altered conditions of structure, of blood, and of nervous influence, produce morbid menstruation as an actual evil, and menace the patient with a life embittered by the various forms of incurable ovarian disease. "Principis obsta, sero medicina paratur." As the practical result of these views, we shall no longer rest satisfied with treating painful menstruation by brandy-and-water, hysteria by sal volatile, and suppressed menstruation by internal and external stimulants; but having detected the local seat of mischief, we shall at once attack it energetically, with a curative and not merely palliative intention.

Another, and not the least important circumstance which renders certain forms of ovarian disease so little known, is the repugnance that patients naturally entertain for those modes of exploration by which alone these diseases can be detected—namely, the digital examination of the patient per vaginam and per rectum. If such explorations were proposed by the practitioner, they would often not be permitted, and it is only when the patient's sufferings have become habitually intense, or when the natural desire of carrying out the ends of marriage has conquered this reluctance, that we are allowed a scrupulous examination

of those glands which in woman minister to the fulfilment of those objects.

Some may perhaps say, "Though we have not called the disease ovaritis, still we have cured it while treating metritis, painful menstruation, &c., by which it was accompanied." We consider this reasoning erroneous. It would not be difficult to prove, that from an insufficient local examination, though the complicating disease may be cured, the ovarian inflammation will often be only alleviated; the patient is said to be cured, but the ovaria remain in a state of sub-acute inflammation, subject to a relapse on every monthly return of ovarian periodicity, or on the accession of any one of the numerous physiological causes of ovarian irritation. A fit soil, we repeat, for disease to spring from, or to take root in, and develop itself, until at last it is recognised, but found to be incurable!

Names acquire and often usurp so much importance, and have had such influence on medical practice, that we must state our reasons for adopting the term ovaritis instead of that generally used in this country—inflammation of the uterine appendages.

We are fully aware that inflammation of the ovaria is often attended by that of the cellular tissue in which they are imbedded, by that of the Fallopian tubes by which their purposes are subserved, and of the serous membrane by which they

are covered; but we still object to the term alluded to, because in using it we lose sight of the organ, the importance of which is paramount, and the inflammation of which is the most frequent, and generally entails that of the oviducts and cellular tissue. We object also to the term appendages, because, in the system of our organs, the ovary ranks above the uterus, which is, in fact, as much the appendage of the ovaries as the urinary bladder is that of the kidneys; these hollow organs are equally subsidiary in their purposes to the function of the respective glandular structures with which they are connected.

It is the ovary which calls the uterus into action,—which gives it a monthly stimulus to the performance of its functions.

We will, then, use the word ovaritis, because in so doing we call a thing by its proper name—a name which has the great advantage of bringing palpably to the practitioner's remembrance an organ, with all its manifold peculiarities of structure, locality, connexion, and physiological importance—a name which reminds him of the progress of such structural lesions, as at first may easily be cured by appropriate antiphlogistic measures.

Martin Solon (*Dic. de Med.*) has said that "ovaritis is a disease which has not yet been carefully described by authors, but that they have gathered together a considerable number of facts,

by means of which it would not be difficult to describe the disease."

We shall do our best to attempt to fill up the desirderatum which he has indicated, without quite admitting his conclusion, and we would fain observe, that in treating the subject, this gentleman has not given us a very good proof of the facility of the task. As Cicero justly remarks, "Those who know not what has been previously written on a subject always remain in a state of childhood," we must therefore briefly allude to the works of former or contemporary authors on the subject of which we propose to treat.

Among those who have furnished us with materials for a description of ovaritis, we must notice that Ætius, Callisen, and Paulus Ægineta were at least acquainted with pelvic abscesses, and that the last-named author has even described, as the best mode of curing them, an incision through the vagina—an operation long forgotten, and only lately revived. Pelvic abscesses were better known in the eighteenth century to Guillemeau, Mauriceau, and more especially to Puzos, who was aware of their originating in the broad ligaments. These authors, however, looked upon such abscesses as being produced by the metastatic deposit of milk; and their theory prevailed until it was sapped by the anatomico-pathological school of France at the beginning of this century, when, for

a time, solidism so far prevailed as to cause the existence and nature of our fluids to be overlooked, and our very blood to be considered as a something providentially placed in our vessels for the medical man to extract by leeches and phlebotomy. Dance, Husson, Baudelocque, Menière, Andral, Dupuytren, Grisolle, Velpeau, and others, have recorded cases of pelvic abscess occurring in the puerperal state. So little, however, was known of ovarian inflammation, that in France, Nauche, Dugès, and Madame Boivin, asserted that it was not possible for the ovaries to be inflamed, except during the puerperal state; while Madame Boivin maintained "that puerperal inflammation of the ovarium is the only type whence general considerations of the disease can be deduced." On the other hand, Montaut, to prove the fallacy of this belief, published an interesting paper, (*Gazette des Hôpitaux*, 1827,) with cases, to prove that the ovaria could be idiopathically inflamed. Since then, Ashwell, Duparcque, Bourdon, and others, have published cases of idiopathic ovaritis. Dr. Doherty and Dr. Churchill have given us interesting accounts of pelvic abscesses, (*Dublin Medical Journal*, 1843-44,) and Dr. Lever has done the same in the *Guy's Hospital Reports*, 1844. In the same year, the question of pelvic abscesses was taken up by Marechal de Calvi as the subject of his *Thèse de Concours pour l'agrégation à la Faculté de Paris;*

and lately, Dr. Henry Bennet read before the Royal Medical and Chirurgical Society a valuable paper on "Inflammation and Abscess of the Uterine Appendages in the Non-Puerperal State," republished in *The Lancet* of July, 1848.

But, on referring to these sources, the reader will see that only the acute form of ovarian inflammation is described, excepting in the valuable paper of Dr. Doherty, to which we shall again advert. With respect to the more obscure forms of ovarian inflammation, the reader will be interested in perusing the writings of Negrier, (*Recherches Anatomiques et Physiologiques sur les Ovaires Humaines*) and of Dr. Lowenhardt, to whose paper we shall refer. He will be likewise repaid for consulting the numerous papers on female complaints, published in the last volumes of *The Medical Times*, by Dr. Edward Rigby; and as it will be sometimes impossible for us to coincide with the views expressed by this gentleman, we rejoice to take this public opportunity of expressing our respect for his acknowledged talents. But the most valuable contribution to ovarian pathology has been made by Dr. Achille Cherau, (*Memoires pour servir à l'étude des Maladies des Ovaires, Paris*, 1844,) and we shall have frequent occasion of quoting him in corroboration of our views.

With respect to the frequency of the disease, we shall prove that even that of the acute idiopathic form is much greater than is generally believed,

while the sub-acute variety, judging by the inflammatory lesions found in the ovaries and their serous covering, is of very common occurrence.

The frequency of puerperal ovaritis varies according to the nature of the reigning epidemic influence, but it at all times exceeds what is generally admitted; for if, on the one hand, Madame Boivin and Dugès only found 35 cases of ovaritis in 686 of metro-peritonitis (suspecting, however, the same disease in many other cases), Tonnellé, on the other hand, found, in 222 cases of puerperal fever, 197 cases of inflammation of the womb and of the ovaries; ovaritis was evident in 58 eases; and in four it had ended in suppuration.

Dr. Robert Lee found the ovaries and Fallopian tubes inflamed in 32 out of 45 cases of puerperal fever. At other times, in all those who die of this disease, evident signs of inflammation of the ovaries are met with. Such, Dr. Lee tells us, was the case at Vienna in 1819; and the same peculiarity was noted by Antoine de Jussieu, Albert de Villiers, and Fontaine, at the Hôtel Dieu of Paris, in 1746. Is not this frequency of puerperal ovaritis sufficient to explain the frequency of those inflammatory lesions of the ovaries met with in the dead body, and hitherto unaccounted for?

OF THE DIFFERENT MODES OF OVARIAN EXPLORATION.

Νεγα δὲ μέρος ηγευμαιτης τέχνης εἰναιτο δύνασθαι σκοπεῖν.
[The possibility of exploring is a most important rt of the art of medicine]—*Hippocrates, Epid.* iii.

We have asserted that the imperfection of our data concerning inflammation of the ovaries is partly to be ascribed to the difficulty of exploring them; and we propose, therefore, in this place, after reminding the reader of the anatomical connexions of these organs, to detail the various plans which have been adopted to ascertain their diseased states; and, when addressing the profession, it is not necessary to prove that it behoves the guardians of the general health to impress on the mind of the weaker sex, that, if the viscera become diseased, on which depend their hopes of happiness as wives and mothers, those organs must be treated like any others; and that, as they submit with patience to the disease itself, it is likewise incumbent on them to submit to an examination, painful to their delicacy, no doubt, but necessary for the recovery of their health.

The peritoneum in the female, after covering the posterior surface of the bladder is reflected to the uterus; spreads over the anterior surface of the body of that viscus; covers its posterior surface; and is

then again reflected to the rectum. As it passes from the anterior to the posterior aspect of the uterus, the membrane forms two wide folds, which contain the Fallopian tubes, the ovaries, and the round ligaments. The two folds of the peritonæum, which thus, by their juxtaposition, constitute the lateral ligaments, are separated from each other, as also from the organs which they contain, by a certain amount of filamentous cellular tissue. This cellular tissue is connected with the sub-peritoneal cellular tissue of the pelvis, although in a great measure distinct from it; and it deserves more attention than it has hitherto received from either anatomists or pathologists. From its nature, it is prone to inflammation; and, consequently, it plays a most important part in inflammatory disease of this region. Its mechanical use is, no doubt, to allow the folds of the peritonæum to separate and glide one over the other, when the uterus increases in its dimensions during pregnancy. It is of extreme importance to be familiar with the exact situation of the ovaries, and their relation to the neighbouring parts. When the uterus is in its healthy and unimpregnated condition within the pelvis, the ovaries, with the intestines superimposed, are situated at the sides of the womb, behind the bladder, and anteriorly to the rectum; but, in consequence of their great mobility, and the laxity of their attachment to the uterus, they are so

placed that, if at all increased in volume, they acquire a tendency to descend into the recto-vaginal space, and are then generally accessible to the finger introduced into the rectum. When, on the contrary, the uterus is enlarged, from impregnation, hypertrophy, or any other cause, it rises from the pelvis into the cavity of the abdomen, and the ovaries, following its ascent, are removed beyond the reach of a digital examination per vaginam. When the volume of the ovary is not such that it can be felt through the abdominal parietes, it may be appreciated by an examination per rectum. In certain individuals, however, the mucous membrane of the vagina is so relaxed in its connexion with the cervix uteri, that the finger may, by depressing the cul-de-sac which exists at this spot, reach the ovary.

Concerning the relation of the ovaries to the neighbouring parts, Dr. Chereau aptly remarks that abnormal displacements of the uterus, such as retroversion, anteversion, &c., entail marked changes in the position of these glands, as do also tumours of the peritonæum, and morbid collections within its folds. And still more important is it to observe that, on the other hand, morbid affections of the ovaries, especially such as modify their volume and weight, act directly on the womb, incline it to the right or left of the median line, and may so force it downwards as to produce a descent of the uterus, or to render it immovable. It is of

great importance to remember this fact, and to know how to discriminate between a simple displacement of the uterus, and one which is produced solely by an affection of the ovary, for the prospect of relief is much greater in the former case than in the latter; and many distressing mistakes have occurred from the want of a proper diagnosis.

ABDOMINAL EXAMINATION.

At first sight nothing seems so easy as to derive information from this ordinary mode of exploration, but such is not the case; it is even difficult to convey by words those niceties of manipulation which can only be attained by repeated practice. Some useful suggestions have, however, been made. The intestines and bladder having been previously emptied, the patient should lie on her back, with the head and shoulders elevated, and the thighs so placed as to form nearly a right angle with the body; the medical attendant should then ask the patient such questions as may divert her attention, and hinder the contraction of the recti-abdominis muscles, the divisions of which have, by the inexperienced, been sometimes taken for tumours. The physician's hands ought also to be so warm as not to excite reflex muscular contraction in the patient, and to render his own sense of touch more acutely sensible. He will then be able to ascertain if there be any tumefaction in

the abdomen, and if so, whether this is attended by morbid sensibility and increase of heat. Should he find a tumour, he will study its peculiarities by varying the position of his hands, the degree of their pressure, and the posture of the patient, in order to ascertain the site, size, and connexion of the growth, whether it be fixed or movable, soft and yielding or hard, pulsating, or otherwise, fluctuating or solid. After parturition, the laxity of the abdominal walls is such as to allow of a more accurate manual examination, for the hand can then plunge into the deepest abdominal recesses. We may add, that a careful examination of this description should never be omitted after confinements, in order to detect any incipient abdominal tumour. Thus, in three of the cases recorded by Madame Boivin, in her interesting *Mémoire sur une des Causes de l'Avortement*, the accoucheur, by neglecting this, failed to recognise the development of ovarian disease, which afterwards proved fatal by bringing on abortion. It is also sometimes possible to discover where adhesions have taken place between a tumour and the abdominal parietes, by a feeling of crepitation and a sound as of new leather, which signs, first detected by the sagacity of Dr. Bright, we have also observed in several cases. It is necessary to state, that unless the swelling of the ovaries be considerable, it will not be discovered by this mode of explor-

ation, and that it will be indispensable to combine it with an

EXPLORATION PER VAGINAM.

To derive the greatest amount of information from a vaginal exploration, the medical attendant should be placed on that side of the patient where ovarian tumefaction is rendered probable by pain or other signs, and he should use the index finger of the hand corresponding to that side, while he places the other hand on the hypogastric region, so as to press the ovary forcibly down towards the exploring finger. Our instructor and most esteemed friend, Professor Recamier, is in the habit of passing his hand under the patient's thigh instead of above it, and finds that this mode of practice affords him greater facilities of investigation. We are thus easily able to detect moderate-sized pelvic tumours, particularly if, as is often the case, they have gravitated towards the recto-vaginal space.

If the tumefaction be less considerable—if there be only that degree of ovarian congestion which partly produces the phenomena of painful menstruation, &c., the ovary may still be situated above the vagina, and then, in order to feel it digitally, the vaginal cul-de-sac, which surround the os uteri, must be raised. To effect this purpose, it is necessary to press the perinæum with the three bent fingers, and, when possible, to introduce both the

middle and index fingers into the vagina, which gives an additional third of an inch to the exploring agent. We are thus enabled to estimate the amount of pain caused by pressure on the swollen ovarium, as well as the degree of heat of the vagina, and whether its superior curve is elastic, or hard and resistant, as if infiltrated. Professor Simpson and Dr. Gendrin state, that in numerous cases they have felt enlarged ovaries *in situ*, by bringing the organ between two fingers introduced into the vagina, while the other hand was pressed down into the brim of the pelvis on the same side. The uterus, in Dr. Simpson's opinion, requires to be anteverted, and somewhat turned to the opposite side with the uterine sound, in order to stretch the broad ligament of the side under examination. He first ascertained the possibility of making this examination of the ovary in a case of natural anteversion of the uterus. When the tumour has so increased that it is no longer entirely situated in the vicinity of the vagina, but has ascended towards the brim of the pelvis, the finger, though it cannot reach its whole extent, will still elicit valuable information respecting its position and state. Thus, the tumour may depress the uterus to the right or to the left, or may flatten it against the pelvis, causing its complete retroversion, and thus render it impossible for the finger to attain the os uteri. M. Robert of Paris, has met with several cases of

this description. We are also able to examine the condition of the inferior segment of the uterus, and to ascertain how far its usual mobility has been encroached upon, and to what extent this organ has been bound down by the thickening and infiltration of the adjacent inflamed tissues.

By a vaginal exploration, we are able to discover whether the tumour is intimately connected with the body of the uterus, or only placed in close juxtaposition to it; thus, in puerperal congestion of the broad ligaments, the tumour is often so moulded as to cap the uterus. In such cases, it is interesting to ascertain whether these bodies adhere intimately, for if the movements communicated to the tumour through the abdominal parietes are felt by the finger placed in the vagina, we may suppose that the tumour and the uterus are intimately connected: we also obtain a correct notion of the diameter of the tumour, one of the extremities of which is at the hypogastrium, and the other in connexion with the vagina. The fluctuation of an abscess of the ovaries, or of their surrounding cellular tissue, may sometimes be distinctly felt by a manual examination, particularly after parturition; but even then it is necessary to support the tumour by placing the finger in the vagina, otherwise, the semi-mobility of the whole tumour might easily be mistaken for the mobility of its contents. When thus exploring, it is sometimes possible to detect a

correspondence of fluctuation between the hand on the hypogastric region and the finger in the vagina. When the tumour is situated sufficiently low down, fluctuation may be detected by examining the patient per vaginam; two fingers (the index and the middle finger) being introduced into the vagina, and placed so as to embrace a segment of the tumour. One finger must then be firmly applied to the tumour to receive the shock transmitted by the fluid, while percussion is made with the other finger on the opposite side of the tumour. In the meantime, an assistant, by firmly pressing in the hypogastric region, forces the fluid to accumulate as low as possible in the pelvis. The facility of thus discovering fluctuation will be in direct proportion to the thinness of the parietes of the tumour, and its prominence in the vagina. If this mode of investigation fails to render evident the existence of pus, the presence of which is otherwise indicated by rational symptoms, an exploratory puncture will decide the question without subjecting the patient either to much pain or to imminent danger.

EXPLORATION PER RECTUM.

Notwithstanding Dr. Simpson's assertions to the contrary, we agree with Stoltz and Hirtz, (both distinguished professors of the faculty of Strasburg,) with P. Frank, Neumann, Schönbein, Romberg,

Seymour, Carus, and Velpeau, with Löwenhardt, Chereau, and Dr. Ashwell, that it is possible to reach the ovaries, in their natural situation, by this mode of exploration, and thus to appreciate their volume and their degree of sensibility. Whatever difference of opinion may exist upon this point, all agree that, on account of the thinness and elasticity of this membranous canal, even slight swellings of the ovaries or the neighbouring tissues may be thus easily detected; and that when the tumour is considerable, it may be the more readily distinguished from the uterus. The most effectual way of performing this examination, and that which permits the finger to reach a greater height, is to place the patient in the obstetric position. While in that posture, Meissner and other German obstetricians tell the patient to approach as much as possible the knees to the breasts.

When introduced into the rectum, the finger can generally attain and circumscribe half of the posterior surface of the uterus; and if not accustomed to this mode of examination, the medical attendant will esteem the healthy uterus to be morbidly swollen. The finger will also be able to detect any swelling of the broad ligaments, and likewise to feel the ovaries, "even when they are not swollen, like a knuckle on either side of the uterus, seeming to spring from one or the other of the sacro-iliac articulations," as Dr. Rigby has

correctly stated. When its structure is healthy, no pain is experienced on pressure of the ovary; but when it is inflamed, the patient often expresses, by her features, that we touch the seat of the disorder. While examining per rectum with the one hand, the other should be placed on the region of the ovary on the same side, the finger being in the rectum, and the physician pressing gently, but suddenly, with the other hand, on the ovarian region. The patient will then experience, in the posterior part of the pelvis, a pain similar to that felt when the ovary was directly pressed by the finger. Pressure on the ovary also produces as much pain in the inguinal region as if that were the actual seat of the impact. If the ovary be much swollen, and the abdominal parietes thin, it is possible, by pressing the ovarian region, to force the ovary against the finger; and this will frequently cause the patient to exclaim that we hold the complaint between our fingers.

The existence of a painful tumour in the recto-vaginal *cul-de-sac*, is in itself a strong presumption of its being the inflamed ovary; but the diagnosis will be assisted by the sound being passed into the bladder, and the uterine sound is of still greater value, for it enables us to raise the uterine fundus, and thus, by displacing the womb, to prove that the painful tumour is the ovary and not the uterus. This mode of examination is far from

being required in most of the cases which come under our observation, but would be indispensable to give certainty to the diagnosis.

Is it necessary to state, that if a fluctuating tumour be situated in the immediate vicinity of the rectum, nothing will be easier than to detect fluctuation by a rectal exploration?

DOUBLE TOUCH.

We have given the name of "double touch" to a mode of exploration, wherein the two previous modes are combined, so that the index-finger being placed in the rectum, and the thumb in the vagina, it is possible to embrace between the thumb and finger any intervening morbid growth.

P. Frank recommends this mode of examination. Dr. Blundell used to employ it, and taught its value at Guy's Hospital, in difficult cases; but Professor Recamier* has principally insisted on, and practi-

* The frequent mention we have made of Professor Recamier, calls upon us to introduce to the profession a reputation eclipsed by many French names of far inferior value, but coming to us well bolstered up by piles of massive volumes. Contemporary with Bichât, Recamier, in 1796, first established clinical lectures at the Hôtel Dieu. He originated, at the same hospital, the plan, now become general in all the hospitals of Europe, of making post mortem examinations, thus giving an impulse to pathological anatomy, which forms the principal title to fame of the medical school of Paris.

All the modern improvements in the treatment of the diseases of women originated with Recamier, for he invented

cally exemplified, its utility, as we shall hereafter have occasion to show, in many interesting cases. It is particularly useful in enlightening us respecting moderate-sized tumours, which are not large enough to rise above the brim of the pelvis, and still small enough to escape identification by the finger, in the rectum or the vagina alone. It enables us to seize the antero-posterior diameter of the tumour, and to recognise its position; and it prevents our mistaking the uterus for a morbid growth. If, as is often the case, the recto-vaginal space is the seat of the tumour, by thus practising

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the speculum. We say invented, as, in a practical point of view, how can we compare his instrument with the *Dioptra* of Paulus Ægineta, of which, in several passages of his works, Fabricius de Aquapendente speaks after the following fashion: —"If you find the orifice of the womb closed by a membrane which impedes conception, know that this is incurable, *for the knife cannot attain so high.*"—(Fabricius de Aquapendente, 1670, p. 749.) To him also we are indebted for the treatment of ulceration of the neck of the womb by caustics. But even without these claims to notice, Recamier would still be eminent.

Though of an ardent temperament, and belonging to a nation prone to change, he preserved intact the sound medical traditions he had received, and has transmitted them unalloyed to his disciples. He did not imbibe the doctrines of Broussais, whose medical reign over France was once all but universal, infecting even to a certain degree the tenets of those who opposed him, and which erroneous doctrines still form the basis of French practice. As a surgeon, too, Recamier has great claims on us, both for the accuracy of his diagnosis, and the boldness of his operations. No

the double touch, and pushing up the perinæum, by pressing on it with the first inter-digital space, we can embrace the accessible part of the tumour, and easily detect its fluctuation, if fluid be present. The practical value of this mode of examination is particularly shown in the following cases :—

The first case is extracted from the interesting memoirs of Dr. Bourdon, (*Mémoires sur les Tumeurs fluctuantes du Bassin*, Revue Médicale, Paris,) and illustrates the advantage of the double-touch, by which means alone Professor Recamier

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region is inaccessible to his inexorable finger, and no obstacle can baffle his endeavours, when he dives into the depths of the most hidden cavities of the human frame, to detect some deep-rooted tumour, or fix upon the precise spot wherein to plunge the liberating steel. But now the encroachments of age have begun to deprive his hand of its wonted firmness and dexterity, and he confines himself principally to consultation practice. When an eagle eye is required, to see through the web of intricacies woven by the anomalies of Nature and the action of conflicting treatment, then is Recamier necessarily called in. When the quick determination of an energetic man is wanted in the moment of extreme danger, then is Recamier sent for. As difficulties increase, so do his persevering efforts, and he finds, in the fertility of his genius, fresh suggestions wherewith to oppose the encroachments of disease.

As a lecturer he did not monotonously drawl out soporific compositions to the sleepy few, but kept alive the attention of his numerous pupils, by allowing the treasures of his experience to flow freely from his lips, clothed in that characteristic garb which always stamps individuality. To fertility of invention, soundness of practical science, and firmness of action,

was able to detect fluctuation in a tumour situated in the recto-vaginal space :—

Case 1.—A woman, aged twenty-four, previously in good general health, but often affected with leucorrhœa and abdominal pains, eight months since gave birth to her second child. About a month ago she was seized suddenly, and without any apparent cause, with shivering, fever, vomiting, and pain and tension in the abdomen. These symptoms were followed by irregular shiverings during the day, and nightly perspirations. When

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he adds the intellectual faculties of a philosopher; and those who have not, like ourselves, heard his luminous disquisitions on some difficult case, in the *laisser aller* of a medical *tête-à tête*, may have some idea of the power of his reasoning faculties, and the acuteness of his dialectics, by referring to the second volume of his work on Cancer.

As a man Recamier stands unsullied. Yet although respected by all parties, for the perfect independence of his character, his high morality, and the conscientiousness of his religious convictions, to say that he is liked by all the eminent physicians he meets in consultation would be contrary to truth, His exasperating want of punctuality would sufficiently account for this; and had this sketch been penned during one of the many hours we have awaited his arrival at a case, we should probably have seen him in a less favourable light. His unwillingness to bend his opinion to those of other physicians he may meet, is another reason of his not being acceptable to all parties. Whether this be really a defect or not may be questioned, for considering his opinion on any case as the expression of a religious duty, Recamier does not give it lightly; but when once given, nothing will induce him to modify it, to suit the convenience or gain the appro-

she entered the Hôtel Dieu, May 1st, 1840, she was labouring under great depression, pain, and headache. The tongue was white; there was sickness, thirst, and constipation; pulse 100.

After a careful examination of the abdomen, a hard tumour, having the shape and size of the head of a fœtus, was found on the right side, extending towards the iliac fossa. It was painful on pressure, and the abdominal parietes could be made to glide over it. From vaginal and rectal examination, it appeared certain that this

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bation of other parties. If, however, with his equals, Recamier is at times uncompromising, amongst his pupils, and the younger practitioners he meets at the bed-side, nothing can exceed the perfect liberty of opinion which he courts, the flattering way in which he speaks of, and the effectual support he gives to, his junior counsel.

As for his unpunctuality, it arises from his conscientious desire to throw into every case all the heartfelt energy he possesses. Whether the patient be rich or poor, it matters not to him; all have an equal share of his attention, and he will never leave his patients until satisfied that he has to the utmost of his power exerted himself in their behalf. Neither the mere counter of medical facts, nor those who give us the well-digested thoughts of others, are the great men; but the master-mind who can vivify the multitudinous facts of this age by the philosophic spirit of olden time. Such is Recamier; and if in this effusion of discipular feeling, we had said double what is true, Recamier may justly be considered an ornament to mankind, and as one of those illustrious characters which at long intervals gem the history of medicine, and justly raise the standard of our profession in the estimation of the world.

tumour descended into the pelvic cavity, as low down as to the recto-vaginal space, moulding itself to the posterior surface and right side of the uterus, which it depressed to the left; the os uteri, obeying the same impulse, was placed in contact with the pubis. Neither by the vaginal nor the rectal exploration, separately performed, could any fluctuation be recognised; but when exploration was simultaneously performed through both canals, the fluctuation became evident. Passing urine was attended, in this case, with no particular symptom, but the patient felt as if she were going to extrude a foreign body per vulvam. The abdominal pain radiated to the loins and thighs, particularly to the right side, which was sometimes benumbed. Ordered, ipecacuanha, twelve grains; poultices; injections per rectum and per vaginam.

Professor Recamier made an incision through the posterior wall of the vagina, where the fluctuation was most evident, and this was immediately followed by the flow of a considerable quantity of a red, viscous, inodorous fluid. The incision was enlarged, and on introducing the finger the parietes of the tumour were found to be thick, resisting, and fibro-cartilaginous in structure. The patient felt much relieved. Baths and injections were administered on the following days.

After a few days the patient was better; the pain and other symptoms diminished; but the ingress of

air into the cavity gave rise to a fœtid secretion. Methodical pressure was applied to the abdomen; the last portion of the injection was ordered to be introduced very slowly, so that it might be retained, and the patient was placed so that the pelvis might be higher than the loins. These precautions were sufficient to deprive the secretion of its fœtid smell. It became daily more like pus; the tumour diminished in size, and was no longer painful. Strength, appetite, and sleep returned.

There was every reasonable hope of a speedy cure, when, on August 13th, ten days after the operation, there was a return of fever, and violent pain in the left side.

15th.—By a vaginal exploration, a hard, painful tumour, about the size of a hen's egg, was found to the left of the uterus. This pressed the uterus to the right; while the opened cyst, by the diminution of its size, no longer displaced it to the left.

For several days it was feared that this second swelling would terminate in suppuration; but by the employment of baths, poultices and injections, it disappeared; and on the 21st, instead of a large tumour, only a small swelling was found. Injections in the cyst were continued, so that the wound might not close too soon; but when the secretion had become less in quantity, and more like lymph than pus, these were discontinued, and the wound healed.

On September 12th, thirty-nine days after the operation, the patient left the hospital, quite recovered, and without any fistulous opening.

Remarks.—This case shows the decided advantage to be obtained from the simultaneous exploration per vaginam and per rectum. It was only by this method of examination that fluctuation could be detected, and the patient's life was saved; for the same explorations, when separately performed, did not afford the necessary information. This cyst had no doubt existed for several months; and its presence was only detected when, from some cause, it had become the seat of inflammation. It was supposed to be an abscess of the broad ligaments; but this error of diagnosis did not influence the treatment, as it was urgent to evacuate the fluid, whether puriform or of whatever nature, as soon as fluctuation had become manifest.

The following case also occurred at the Hôtel Dieu, in the practice of Professor Recamier, and again shows the utility of the double-touch in correcting an erroneous diagnosis founded on vaginal and rectal explorations separately exercised:—

Case 2.—A female, aged thirty-two, having had three miscarriages and six children, the youngest eight months old, had, ever since her last confinement, suffered pain in the left side of the abdomen, with constipation, and a frequent desire to pass

urine, even when in the horizontal position. There was no difficulty in moving the left leg, no sickness, nor did the abdomen present any extraordinary tumefaction. Her face was pale, and bore the expression of suffering. There was pain in the left hypogastrium, which was increased by manual examination, a hard tumour being detected in the fundus of the pelvic cavity.

By an examination per vaginam, nothing preternatural was found in the neck of the uterus, but it inclined to the right side, while to the left was found a hard, globular tumour, about the size of an egg. The examination per rectum furnished much the same evidence. The patient suffered from slight fever at night, followed by perspirations.

Diagnosis.—Phlegmonous congestion and incipient suppuration in the broad ligament. Leeches and tepid baths, poultices, and enemata were prescribed.

A few days afterwards, the patient being better, another examination was made, but in this instance per vaginam and per rectum simultaneously, which had not been done previously. It then became evident that the womb was not to be felt in its right place; that it had been diverted to the left side, thus simulating a tumour of the broad ligament. The patient recovered from the circumscribed chronic peritonitis, but the inclination of the womb remained, on account of the firm ad-

hesions which had taken place, and bound it down. For a long time walking was painful to the patient.

We took the minutes of the following case in Dr. Rayer's ward at La Charité, in Paris, and we adduce it to show, that if the double touch had been performed, the tumour, without doubt, would have been detected, and the patient's life, in all probability, would have been saved.

Case 3.—A woman, aged forty-five, had been long suffering from some undefined abdominal complaint before entering La Charité, on February 15th, 1848. The abdomen was uniformly enlarged, and tender when pressed; there was also retention of urine; and on introducing the catheter the instrument took a perpendicular direction against the pubes, and only a few ounces of urine were voided, though, on percussion, the bladder still sounded as if full. The male catheter was then substituted for the female, and Dr. Blanche, with some trouble, and by exercising a moderate degree of force, penetrated into a second portion of the bladder, and evacuated from two to three pints of urine. This operation was daily performed, with the same difficulties. All this was esteemed by Dr. Caseau to be the result of an ovarian tumour; in Professor Velpeau's opinion, it was caused by an uterine tumour; but Dr. Rayer prudently forebore giving any diagnosis. The patient lingered for

several days with increased abdominal pain, fever and weakness, and then died.

Post-mortem Examination.—We found general peritonitis, with considerable effusion. The bladder was enlarged, and presented traces of chronic inflammation, and a few gangrenous spots; the uterus and ovaries were without adhesion. To explain the peculiarity of the patient's symptoms, we found between the bladder and the rectum a globular tumour, about the size of a cocoa-nut. Its parietes were very thin, firm, and fibrous. It contained a yellow fluid, of the colour and fluidity of ordinary urine. It was this tumour which pressed on the bladder against the pubes, and so divided it into two cavities, that on sounding the woman it was not difficult to penetrate into the smaller cavity, but it required greater force and a longer instrument to enter the second portion. This woman had been carefully examined by some of the most eminent men in Paris, yet the explorations per rectum and per vaginam separately did not lead to the detection of the tumour, perhaps on account of its uniform elasticity; but had the double touch been put in practice, the tumour would have been detected; and if its detection had taken place before the supervention of general peritonitis, the patient's life might have been prolonged. In reference to this case we may remark, that had the patient fallen into inexperienced hands, force might have

been employed in the usual direction of the female urethra, the cyst might have been perforated, and its contents evacuated, and looked upon as urine. One of two things would then have occurred—the inflammation of the cyst, as a consequence of the ingress of the urine to its cavity, and ultimate death; or adhesive inflammation might have taken place, and the patient have been cured without the nature of her complaint being ascertained. A case of an ovarian cyst was lately cured by Professor Bennett, of Edinburgh, after the emptying of its contents through the bladder.

To those who might think we make this chapter too long, we would willingly own with Hippocrates, that we take the exploration of diseases to be "a most important part of the healing art."

ON

DISEASES OF MENSTRUATION

AND

OVARIAN INFLAMMATION.

CHAPTER I.

SUB-ACUTE OVARITIS.

Syn.—Chronic ovaritis; secondary pelvic inflammation. (Dr. Kennedy.)—Abdominal inflammation.—Menstrual colics.—Amenorrhœa.—Dysmenorrhée hystéralgique. (Géndrin.)—Dysmenorrhœa.—Menorrhagia.—Hysteria.

Def.—Swelling of the ovaria, with increase of heat, and pain upon pressure, accompanied by intermittent or permanent pain or uneasiness in the ovarian region, radiating to the loins and thighs, and producing, according to the constitution of the patient, an arrest of menstruation, or its profuse flow, intense local pain, or hysterical symptoms.

By *sub-acute* inflammation, as distinguished from *acute*, we do not so much imply a difference in

the intrinsic nature of the morbid phenomena, as a limitation of the inflammatory action to certain distinct parts of the ovaries, as the ovarian follicle, and to portions of the ovarian tissue so small that they give rise to little swelling, and to no febrile action; and here we may point out, as peculiar properties of the sexual system in women, the liability to inflammation of certain portions of the generative apparatus, in which the others may not participate—a peculiarity to which the ovary is still more liable, on account of its complex structure.

Sub-acute ovaritis, whether primarily developed as such, or supervening on the acute inflammation of the ovaries, is necessarily a chronic disease, from the circumstance of the ovaries being subject to a periodical augmentation of nervous and sanguineous excitement. Chronic ovaritis is always sub-acute; and as sub-acute inflammation of the ovaria is often present without being chronic, we have thought it best to adopt the appellation common to them both, instead of that generally made use of. Sub-acute ovaritis is by far the more common, and, therefore, we will first proceed to its investigation.

It is evident, however, that in the determination of causes, in the symptoms, and in the treatment of these two diseases, we shall find a great similarity, we shall also find that they may pass the one into

the other, the sub-acute being exasperated into the acute, while acute ovaritis sometimes becomes sub-acute, or chronic, as it is then generally termed.

We admit, then, two forms of ovaritis—1st, the sub-acute; 2nd, acute ovaritis; and, in attempting for the ovaries what has been so felicitously done for other organs, we will endeavour to show that the groups of symptoms associated under the classic names of amenorrhœa, dysmenorrhœa, menorrhagia, and hysteria, are often the mere symptoms of sub-acute ovaritis.

We stand not alone in this belief. Joseph Frank and Dr. Chester hold the same creed. Dr. Robert Lee is much of the same opinion. Clarus distinctly says, that he considers the disorders of menstruation as the symptoms of chronic ovaritis; and Dr. Rigby strenuously advocates the same doctrine.

Pathological Anatomy.

Physiology is the only basis of pathology, and by a knowledge of the healty functions of our organs can we alone hope to detect the causes of morbid functions of the same organs. In studying the diseases of menstruation, let us not forget that this is the special office of the ovaria. We admit that menstruation does not consist in the mere periodical discharge which may or may not ac-

company it, and that the maturing and periodical elimination of ovules is the primary fact of menstruation, and that which determines all the other phenomena of that important function. Now, if we inquire into the anatomical conditions of the ovarium, we find in its extremely spongy and erectile tissue, and in the great proportional development of its vessels, predisposing causes of inflammation. If we study the ovaria during ovulation, we find that there is a sanguineous turgescence of these organs, and an appearance of bloodvessels on and in the vicinity of the vesicle, which, like a small nut, protrudes from the ovary. This is followed by a gradual thinning, and progressive absorption, and bursting of the vesicle. This congestion and effort to eliminate a foreign body, and subsequent ulceration and cicatrization, when observed elsewhere are called inflammatory; they attend the natural function of the ovaria: but we must, however, admit that this physiological excitement may easily merge into the pathological condition, called inflammation. Having premised thus far, we will now proceed to state what is the pathological condition of the ovaria when sub-acutely inflamed.

As with any other organs bounded by a serous membrane, the ovaries and peritonæum may be separately, distinctly, or simultaneously the seats of inflammation. Nowhere are adhesions, false

membranes, and other products of inflammation, so frequently found as in that portion of the peritonæum which covers the generative organs of woman. Some authors—Dugès, amongst others—have asserted that sometimes (although not exhibiting any false membranes) the peritonæal covering of the ovaries and the Fallopian tubes still presents signs of inflammation, the peritonæum being thicker than usual, the subjacent cellular tissue having lost its transparency, being white, or else exhibiting spotted or striated suffusions, caused by the infiltration of a thick opaque serosity, of a white, pink, or yellow colour, or else distended with a gelatinous substance. Chronic peritonitis has been found more frequent in girls than boys, and mostly in those who had already begun to interrogate the secret sources of pleasure which lie hidden within them.

The ovary itself is slightly increased in size, or double its usual dimensions, resisting and elastic; on pressure, it yields a sensation of fluctuation; its surface is smooth, polished, and glistening; its tissue more red than natural, though less resisting; congested with blood, as described by Negrier, or moist with a sero-viscous fluid, called spermatic by Bonnet, Lieutaud, and others, in consonance with what was then the name of the ovaria, *testes muliebrum*, and in harmony with the then current opinions of the day. It is traversed by a number

of smaller vessels, especially in the neighbourhood of the cells, which, placed at the surface of the organ, contain ovules, and may be healthy or diseased.

The vesicles have been found presenting *individually* evident signs of all the different stages of inflammation, although surrounded by a perfectly healthy stroma; the parietes of the vesicles have been found highly vascularised, so as to look like red currants, friable, lined with false membranes, or full of well-formed pus—minute but unerring testimonials of previous inflammation. The proof of their chronic inflammation has still more frequently been observed. They may be hypertrophied, of the size of a pea, or larger, round, or falciform, with an extremely dense white internal membrane, having a polished surface of the thickness of parchment. They may be also found pellucid, having interposed between them and the parenchyma of the gland one or two other distinct membranous layers, with or without intermediate granular matter. They may contain either a green, yellow, or fatty liquid, or a pulpy substance, like the interior of an encephaloid cyst, or even solid saline concretions, as observed by Morgagni. The vesicles are sometimes found, on the contrary, atrophied and blighted; their liquid contents being partly absorbed, the follicles are no longer fully distended, but look like wrinkled sacs, of a white or

greyish colour; and here we may observe, that, however difficult it may be to understand, inflammation is known to cause sometimes hypertrophy of the ovaria, while at other times, under the same mysterious influence, the ovaries of young women have been found as hardened and collapsed as those of women who have outlived the period of active ovarian life. These white bodies and cysts are never observed before menstruation; but they may be met with in every other stage of life, in virgins as well as in prostitutes. From the nature of these lesions, which are evidently inflammatory, we are able to infer the relative frequency of various stages of inflammation in one or more of the ovarian follicles.

Heretofore, the minute lesions of these organs have been neglected, because they did not embody an idea, or uphold any particular point of doctrine. As the physiology of the ovaria scarcely dates from later than yesterday, we need not be surprised at finding their pathology in an embryonic state. These lesions have been cursorily noticed by embryologists, or physiologists, studying the ovaries from their own peculiar points of view; and, when the numerous ovarian lesions are studied with the microscope, and other resources now called to the aid of the anatomist, and the facts elicited are put together by means of a constructive idea, it will then be no longer difficult to present a richer dis-

play of anatomical facts than the meagre elements of information we now possess.

When sub-acute ovaritis occurs in the puerperal state, the ovaries are found greatly increased in size, their tissue becomes more friable, and infiltrated with yellowish or violet-coloured serum, sometimes resembling that of the spleen, but at other times it is more infiltrated with serum, slightly tinged with blood. In recording these lesions, and ascribing to them their due value, we must not, however, forget that the ovaries may be partially, and even seriously inflamed, without the power to perform their proper functions being permanently compromised. Do we not see the substance of the lung recover from the solid state, and again become permeable to air when the patient is cured of acute pneumonia?

The liability of the Fallopian tubes to inflammation is proved by their often presenting undoubted traces of its having existed. This is not only the result of our own experience, but is confirmed by the testimony of those who, like Dr. Ashwell, Dr. R. Lee, and Professor Cruveilhier, have alluded to lesions of the ovaries, and of their ducts; and Dr. Hooper, in the few pages prefacing his admirable delincations of uterine and ovarian disease, does not hesitate to say, that "the Fallopian tubes are frequently found to have suffered from inflammation." Their inflammation is almost always a con-

sequence of ovaritis or metritis, and is confounded with these diseases, exactly in the same way as Fallopian cysts are confounded with ovarian—a confusion of diseases which, as the same treatment is required in both cases, is indeed of but little consequence. As regards the morbid conditions which have been noticed, the fimbriæ may be found preternaturally florid, highly vascular, filled with blood, attached by recent false membranes to the ovaries or adjacent organs, or bound down to the same by firm, thick bands of long standing. The fimbriæ of both Fallopian tubes may be found destroyed, but in general those only of one or the other are seen to be totally so.

This is a lesion of very frequent occurrence (Dr. Hooper), and with it generally coincides the obliteration of that extremity of the tube by which it communicates with the peritonæal cavity. The oviducts then terminate in a cul-de-sac, they are also increased in size, and are mostly tortuous, or of a pyriform shape, and their sides are thicker than usual, and fluctuating when pressed. On being opened, they are found to contain a serous, albuminous, puriform, or bloody fluid, and their internal surface is covered with tenacious or flocculent albuminous substance, the removal of which exposes tissues which are inflamed and softened. We may here observe, that however frequently obliterations of the Fallopian tubes may have been

found, their imperforation, whether congenital or accidental, has been very seldom met with. A web of false membranes has been often discovered lining the interior of the oviducts of prostitutes, and of those women who have recovered from puerperal metro-peritonitis; whereas the same tubes are often found full of mucus, or even pus, in those who have died in the acute stage of the disease. Whether or not this condition furnishes any direct therapeutical indication, we will leave for future consideration.

In some cases, the oviducts may be perfectly healthy, and still unable to perform their allotted task, owing to the existence of false membranes, by which they may be glued to the neighbouring viscera, so as to preclude the possibility of their precise adaptation to the ovaries. Varying in density, from that of the finest diaphanous film to that of strong ligamentous bands, these false membranes are of very frequent occurrence; and, in prostitutes, the ovaries and Fallopian tubes are seldom found without some one or other of the lesions already described, if we may rely on the testimony of Walker, Renaudin, and Dr. Oldham.

CHAPTER II.

CAUSES OF SUB-ACUTE OVARITIS.

PREDISPOSING CAUSES.

We shall investigate, at some length, the causes of sub-acute ovaritis, so as to preclude the necessity for treating of them again when describing the acute form. The causes of both diseases are the same, different effects being produced by the difference of their degree, and the variety of their combinations. The causes of sub-acute ovaritis are, like those of other diseases, predisposing and exciting.

The principal predisposing cause is to be found in the nature and function of the genital organs; for although in woman the ovary is, anatomically speaking, separated from the oviducts, excepting during the first few months of fœtal life, (Meckel and Rosenmuller,) still, in a physiological point of view, the generative intestine is *one* in woman, as it is, anatomically, in many of the lower animals;

and whenever these organs are called into functional activity, they unite and become as one organ. Thus, during menstruation, and the orgasm of sexual intercourse, the Fallopian tubes obey an elective impulse, in virtue of which the fimbriated extremities embrace that particular part of the ovaries whence an ovule is to escape, so as to receive it, and the fluids by which it is accompanied,—a fact which has been repeatedly noticed in women dying during menstruation.

This attraction is the more extraordinary, because at that time the Fallopian tubes are full of mucus, which would seem to forbid the adhesion of the fimbriæ to the distended ovary; and still this attraction is strong enough to resist the sudden passage of the neighbouring viscera (bladder, intestines, &c.) from a state of repletion to that of vacuity. That the fimbriated extremity of the Fallopian tube embraces the ovarium during coïtus, and when the animal is in heat, has been stated by numerous authors, and most positively by Cruickshank, in the following words:—"The Fallopian tubes, independent of their black colour, were twisted like writhing worms, the peristaltic motion still remaining very vivid. The fimbriæ were also black, and embraced the ovaria (like fingers laying hold of an object) so closely and so firmly as to require some force, and even slight laceration, to disengage them." (*Philosophical Transactions*, 1797.)

It has even been asserted by Dr. J. E. Pank, (*Archives Gén de Méd.*, 4th Series, tom. iv.) that the Fallopian tubes are always united to the ovaria by a thin membrane. This opinion is founded on the following fact:—opening the body of a girl who died asphyxiated, during menstruation, Dr. J. E. Pank found "that the fimbriated extremity of the right Fallopian tube embraced the corresponding ovarium, being not only placed in apposition with it, but even connected to it by means of a very thin, transparent membrane, which, leaving the fimbria extended on all sides over the ovarium, thus formed a bond of union between these two bodies."

We believe that this membrane was but a product of inflammation; however, notwithstanding the temporary anatomical hiatus, there is, during the reproductive period of woman's life, a constant interchange of physiological and morbid stimuli between the different portions of the generative intestine.

The periodical congestion of the ovaries is an acknowledged fact, and was strikingly exhibited in a woman affected with hernia of the ovary, which was always observed to become larger immediately before the catmenia, and to diminish on their cessation, (Verdier, *Traité des Hernies* 1840.) We may therefore admit, that if by any cause this state of congestion were carried to a

greater degree than ordinary, or protracted beyond the usual time, general inflammation might attack the organ itself, having its source in the local irritation of which the ovaries are the seat at each menstrual period; and we find, accordingly, that in many of the published cases of ovaritis the disease comes on at the time, and instead, of the menstrual discharge. Among the predisposing causes, one of the first to be mentioned is, constitution. The disease may indeed occur in all constitutions, but does so more particularly in women who are nervous, irritable, hysterical, and of a scrofulous habit. Girls with long eyelashes, blue sclerotica, and irregular menstruation, have been found most frequently attacked with it, by Burns, Jepherson, Copland, Boivin, and Dugès; but, we have not been able to ascertain the truth of an observation made by Retzius, that women of a certain age, who have borne children and have not suckled, are often attacked with ovaritis. Let us suppose the phenomena of menstruation taking place in one of those delicate girls whose constitution we have indicated,—who may perhaps, in her childhood, have been subject to mesenteric deposit, or tubercular peritonitis, not uncommon in children, followed by adhesions of the uterine appendages, and a swollen state of the ovaries; and let us point out what may be the result (in such cases) of the fulfilment of the ovarian function. The first

establishment of the menstrual periods cannot take place without the chance of serious disorders, and its return is often attended by the painful symptoms hereafter to be described. Marriage gives an additional impulse to the morbidly disposed ovaries. If, by conception, the ovaries are placed in contact with their final stimulus, this may awaken in them a diseased action, which otherwise might have remained dormant for a time, or have completely disappeared. Abortion is not unfrequently brought on by the nervous ovarian impulse soliciting the expulsion of the fœtus; or the uterus may be bound down by adhesions, which preclude the possibility of its expansion. Should childbirth occur, with its attendant determination of fluids to the pelvic organs, how fatal to ovaries predisposed to disease may be this superabundance of materials and vitality with which they are, for a time, entrusted!

Amongst the functional causes of sub-acute ovaritis, we have alluded to sexual intercourse. Let us consider its excess, or privation, or its intemperate exercise. The excessive use of this stimulus is not unfrequentiy a cause of sub-acute ovaritis in newly-married women, as the effect of the first impression of a novel stimulus, and its imprudent indulgence. But it is more especially the sequel of the culpable and inordinate exercise of intercourse, as seen in women in every respect un-

fortunate. Walter and Renaudin state, as the result of their experience, that the ovaries of prostitutes are seldom without some morbid lesions, and Dr. Oldham has lately confirmed their assertion by describing these lesions, which are those of ovaritis. The privation of sexual stimulus is no doubt a cause of certain forms of sub-acute ovaritis; whether we consider its absolute privation in healthy women, whose feelings and passions are strong, or its sudden denial to those accustomed to its indulgence, as in young widows, whom Hildenbrand considers to be often attacked with this complaint, or as in prostitutes when placed in confinement. In such cases the cerebro-spinal sympathies are called into active play, and hysteria masks its local cause. Marriage late in life is sometimes of itself a sufficient cause of sub-acute ovaritis. It seems as if the ovaria, having been debarred their proper stimulus when most needed, become so accustomed to the privation, that when the stimulus is at last presented to them it produces a morbid impression. Sub-acute ovaritis is also one of the pathological elements of that state truly described as the critical time in the life of a woman, and then, in most cases, it reacts on the uterus so as to produce those sudden floodings which so often terminate menstruation. If this be not the case, the periodical congestion, which has lasted for so many years, does not at once subside; it still

exists long after the menstrual flow has ceased; and as this ovarian congestion is not relieved by its accustomed discharge, the ovaries are liable to inflammation, if such a result be not carefully warded off by repeated purgatives and judicious bleeding, according to the practice of our medical forefathers—a practice, perhaps, too much neglected in our own day. This crisis in female life is particularly dangerous, both to those involuntary nuns of a society overstocked with women, who have impatiently borne the burden of their virginity, and also to those who have given themselves up to excesses of sexual indulgence. We cannot close the catalogue of predisposing causes without including certain influences, which we shall call moral causes, for want of a better name. They are not tangible, it is true, but they are too important to be overlooked. We allude to all those excitements which tend to exaggerate the impulse of unsatisfied desires — desires, which, though natural in themselves, have been pampered by bodily and mental inactivity, and unduly excited by thoughts, books, pictures, conversation, music, and the fascinations of social intercourse,— burning desires, which cannot be quenched by their legitimate satisfaction—at least, in our capitals, on account of the greater proportion of marriageable women than that of men, who are attracted

to every vortex of civilization,* neither can the organs which prompt such desires be relieved of the accumulated fluids by which they are placed in a state of vital turgescence. If, as we are told (*Seymour on Diseases of the Ovaria*) birds lay eggs under the influence of impressions calculated to promote certain feelings without the congress of the male bird, may we not justly infer that certain feelings of the mind are in women sufficient to stimulate the organs of ovulation? We see the influence of

* The number of involuntary virgins may be guessed at by the perusal of the following abstract from the Population Returns for 1841, given in *The Companion to the British Almanac* for 1844. It is an analysis of the ages of persons living in Great Britain, distinguishing those resident in the principal towns from the other parts of the country. Under the head of England we find the following figures:

	Principal Towns.		Remainder of Country.	
	Males.	Females.	Males.	Females.
15 to 20 ...	420,967	465,662 ...	310,932	291,825
20 to 25 ...	408,210	501,524 ...	271,249	281,310
25 to 30 ...	353,103	408,871 ...	220,682	226,879
30 to 35 ...	329,789	366,926 ...	201,325	203,116
15 to 35	1,512,069	1,742,983	1,004,188	1,003,130

Thus it appears that, though in the remainder of England the number of young men and young women, from 15 to 35, is very nearly the same, in the principal towns there is an enormous disproportion; in fact, 230,912 more young women than young men. This excess of females continues through all the subsequent periods of life, only in a rather less proportion, but quite enough to throw a great pressure on the weaker sex in every stage of its existence. Scotland exhibits very much the same results. In another table, showing what would be the number of persons of the several specified ages, supposing the number of males and females whose ages were

such modes of excitation on man; that they promote the secretion of the seminal fluids, and we may therefore infer that they produce on woman an analogous effect. When we consider how much of the lifetime of woman is occupied by the various phases of the generative process, and how terrible is often the conflict within her between the headlong impulse of passion and the dictates of duty, we may well understand how such a conflict must react on the organs of the sexual economy

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returned to have been 10,000 respectively, we find the following figures for England and the metropolis:—

	England.		Metropolis.	
	Males.	Females.	Males.	Females.
15 to 20 ...	1,004	989	905	934
20 to 30 ...	1,719	1,851	1,970	2,174

That is, in a given number of each sex, there are many more young women between 15 and 30 living in England, than there are young men of the same age; and this disproportion is much greater in the metropolis than in England at large. Another table is still more to our purpose, as it gives the actual numbers of males and females in the metropolis divided into their different ages. We find in it the following figures:—

	Males.	Females.
15 to 20	79,031	93,011
20 to 25	89,770	116,326
25 to 30	82,315	100,155
30 to 35	78,247	92,193
15 to 35	329,363	401,685

The disproportion continues through every successive stage of life; but, confining ourselves to the period between 15 and 35, we find, in the metropolis alone, 72,312 more young women than young men.—(From *Natural History of Woman*, by the Author, a work which will appear in January, 1851.)

in the unimpregnated female, and principally on the ovaria, the acknowledged centres of the sexual system, causing an orgasm which, if often repeated, may be productive of sub-acute ovaritis, characterized sometimes by the development of hysteria. Nonat has twice seen acute ovaritis in the virgin.

The left ovary seems more liable to inflammation than the right. We have found the right ovary affected in only five out of seventeen cases. Our experience, therefore, confirms the assertions of Dr. Rigby, Chereau, and Tanchou, upon a point which is not without interest, because in ovarian dropsy the right ovary is generally diseased.

Roux has pointed out the congenital shortness of the vagina as being not an unfrequent cause of ovarian and uterine inflammation in those who are placed under matrimonial influences.

EXCITING CAUSES.

Some of these are mechanical: falls on the feet, on the knees, or on the sacrum, have brought on ovaritis; violent jolting on horseback, riding particularly immediately after menstruation, has had the same effect. These mechanical causes have necessarily an increased power of action when they occur during menstruation, even if they do not determine the suppression of the discharge.

The necessity for employing instruments in parturition is an admitted cause, and we may agree

with Mr. Lever that any disproportion between the child's head and the pelvis of the mother will increase the likelihood of subsequent inflammation of the ovaries and Fallopian tubes. A first confinement is a most important cause, for in 25 out of Mr. Bell's 45 cases of pelvic tumours, and in 15 out of Mr. Taylor's 32 cases, they occurred in primiparæ. A very rapid delivery, and the tearing away of the placenta, have also appeared to bring on ovaritis.

Styptic injections employed to stop flooding in the parturient woman, as well as stimulant injections into the cavity of the womb, have been known to produce ovaritis and other pelvic inflammations. Mr. Leroy d'Etiolles has twice seen ovaritis caused by emollient injections into the womb, and Ricord says—"It must not be overlooked that very fearful hysterical symptoms may follow the injection of a solution of nitrate of silver into the cavity of the womb"—a valuable warning against meddlesome surgery in uterine diseases.

We now come to a cause of too much importance to be lightly treated—the retention or suppression of the catamenia. This may be either the cause of ovaritis or one of its symptoms. We shall now consider it in the first point of view. Retention of the menses may be,—First, congenital, as in those numerous cases where it is the result of occlusion by the hymeneal membrane, or of the uterine

aperture. Second, it may be accidental, being produced by the blocking up of the passage of the vagina, resulting from parturition, or the pressure of tumours, (as in a case related by Dugès.) It may depend on the gluing together of the os uteri after parturition, or on the imprudent cauterization of its internal surface, and also on the inflammatory tumefaction or the spasmodic contraction of the cervix. The inflammatory tumefaction and spasmodic contraction of the os uteri are most frequently owing to cold applied internally, by taking ices, or a draught of cold water; or externally, by its sudden or prolonged impression on the feet and hands, or on the whole body, by the retaining of wet clothes; and the mode of action of this agent has been shown by the painful colics and prodromi of peritonitis which have sometimes immediately followed the introduction of a cold speculum. Venesection, drastic purgatives, and emetics (when given during menstruation or immediately before) have often been known to produce suppression, and so has sexual intercourse. Any general disturbance of the circulation, such as fevers with or without inflammation, produce the same effect; so may any violent perturbation, mental or moral, occasioned by sudden joy, grief, or anger. When these causes occur on the approach of menstruation, the suspension of the impending flow is followed by subacute ovaritis, accompanied by dysmenorrhœa, or

hysterical symptoms. When, on the other hand, they operate during the menstrual flow, the sub-acute ovaritis they may produce is attended by engorgement of the uterus, which is accounted for by the active congestion of its tissues, and the retention of blood in its irritated cavity.

According to some authors, suppression of menstruation gives rise to ovaritis in those who have not borne children, and to metritis in those who have; but we have not been able to ascertain the truth of this assertion. The retention and suppression of the menses has a twofold influence in the production of ovaritis, and we may also add, disease of the pelvic organs in general, as we shall hereafter show:—first, by the retention of what was to have been excreted, and the consequent congestion of the organs which secrete the menstrual discharge; secondly, by the arrest of the ovarian discharge, and the subsequent oppression of the system by some reflected influence of a nervous kind.

1. The mechanical effects of retention of the menstrual flow are, the repletion of the womb and the Fallopian tubes; the distention by, and necessary reaction of, the ovary and Fallopian tubes against a menstrual flow too abundant in quantity, and sometimes rendered noxious* by its

* We agree with those who consider the menstrual discharge as a secretion; and therefore believe that there may

prolonged sojourn in the human body. It has even been proved that in some rare cases the distention of the Fallopian tubes is so great as to detach the fimbriated extremity from the ovarium, allowing a flow of blood into the peritonæum, and thus producing peritonitis.—*Archives Gén. de Méd.* 1848.

2. The suppression of the menstrual flow also acts by the arrest of the ovarian nervous discharge which it involves, and the consequent oppression of the system by some reflex nervous influence. For how can we suppose that sudden death, in the midst of the most alarming symptoms of convulsions and delirium, could be solely produced by

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be some truth in the universal prejudice concerning the noxious properties of this discharge. We have sometimes been struck by the peculiarly offensive exhalations of red-haired women. During the menstrual periods, M. Brièrre de Boismont has observed the same in negresses and mulatto women, and says, that after touching them during menstruation, his fingers retained for a time a disgusting odour. A newly-born child was confided to a woman seemingly in every way fitted for the duties of wet-nurse. The child was, however, after a time, seized with fever, and its thighs and body were covered with erysipelas. This eruption disappeared after a fortnight, to reappear in a month, and this was repeated for a whole year, when Dr. de St. André, having ascertained that the appearance of the eruption always coincided with the monthly periods, ordered the child to be weaned. The eruption then disappeared permanently.—*Journal Général de Médecine*, Dec. 1819. Dr. Cormack has also drawn attention to the toxæmic effect of the retention of the menstrual flow, in his observations on convulsions arising from suppression.

the retention of a few ounces of blood; or, if we could even admit such an explanation, what should we do under circumstances similar to those of authentic cases wherein the same symptoms have been brought on by the suspension of the *impending* menstrual flow? (Morgagni, *Litt. Anal. Med.* 1845; Rullier, *Disq. Inaugurale*, Paris; Whitehead, *London Medical Gazette*, April, 1848.)

Physiology allows us to believe, that besides the arrested flow of blood, there is in menstrual suppression an interruption of the normal current of nervous influence, which every month takes its periodical and centripetal course from the ovaries. Does the interversion of this accustomed nervous flow produce inflammation by reacting on the ovaries? May not it do more, and by reacting on the ganglionic nervous system, slowly give rise to diseases of imperfect nutrition,—chlorosis, and consumption? May it not suddenly introduce some mysterious element of disorder into the recesses of the cerebro-spinal system, that opposite pole of our vital microcosm, and thus produce delirium and speedy dissolution? In the cases of this description recorded by Morgagni, Rullier, Whitehead, &c., on post-mortem examination, nothing was found to explain the cause of death but the congested vessels of the brain, and a swollen, turgid, or inflamed state of the ovaria.

We come to a very frequent, although not

generally admitted cause—the transmission of inflammation from the uterus to the ovary by the Fallopian tubes.

The catarrhal affection of the neck of the womb produces engorgement of the uterus and sub-acute ovaritis in the same way that inflammation of the duodenum gives rise to hepatitis, while that of the urethra causes daily that of the testicle; and, in the same way that inflammation is not unfrequently transmitted to the neck of the womb from the external organs of generation.

Extensive ulceration of the internal surface of the neck of the womb may give rise to ovaritis, and without appealing to our own practice, we shall quote the example of intense inflammation of the neck of the womb which Madame Boivin has depicted in her Atlas, and with which coincided an inflammation of the right ovary. Our friend Dr. Henry Bennet assures us that he has frequently seen chronic inflammation and ulceration of the cervix uteri followed by ovaritis. Dr. Doherty also states, that he has met with chronic ovaritis supervening to malignant diseases of the womb. But it is principally in that peculiar form of catarrhal inflammation of the internal surface of the neck when no ulceration can be detected and where a diminished uterine orifice is plugged up with solid mucus, that the transmission of inflammation to the ovaries is most frequently observed.

This is a very tedious form of uterine disease, and after lasting some time a new state of suffering begins; deep-seated pain is felt in the ovarian region of one or both sides, which may be followed by a distinctly perceptible ovarian swelling. Dr. Melier was the first to draw particular attention to this succession of morbid phenomena. —(*Mémoires de l'Académie Royale de Medicine*, vol. ii.) In a case he attended with Dr. Roche, the patient had for a year been affected with catarrhal inflammation of the neck, accompanied by pain behind the pubis; when she began to experience a totally different kind of suffering in the iliacal regions, and an ovarian swelling could be distinctly felt in the right iliac fossa. Whenever the pain in the cervix was exasperated, the ovarian tumour became likewise more painful, and on attempting to dilate the uterine orifice, the process caused the tumour to be more painful. Dr. Melier has seen several cases of this description, and it has also fallen to our lot to witness some cases in which so great a community of feeling has existed between the two organs, that any increased inflammation of the womb produced increased inflammation of the ovary, and by healing the uterine surface we have abated ovarian irritation.

In proof of our position, we may record the case of a young lady affected with ulceration of the

cervix-uteri, and likewise a swelling of the ovary to tripple its usual size. The disappearance of the tumour followed the cure of the inflammation of the cervix by cauterization with the red-hot iron. In another case of uterine disease, which had caused the right ovary to attain to quadruple its usual size, Lisfranc amputated the neck of the womb, and six years afterwards the tumour had not increased. But why should we seek for instances out of the particular subject at present in hand, since we often find symptoms of ovarian engorgement disappear from merely treating the uterine ulceration—a fact which has, we think, been overlooked by our friend and fellow-labourer Dr. H. Bennet, when he ascribes solely to ulcerations of the neck of the womb the power of producing every variety of diseased menstruation.

Thus, ovaritis is often an attendant on metritis; sometimes the two diseases co-exist, and then the former is masked by the symptoms of metritis. Gendrin explains the simultaneous inflammatory seizure of the womb and the broad ligaments by the fact of nerves and arterial vessels ministering in common to the womb, the ovaries, and broad ligaments. He might have added, by the common sympathies by which they are united for the same purpose. If idiopathic inflammation of the womb produce ovaritis, it stands to reason that the same result may follow the use of those active agents by

which we seek to substitute a healthy inflammatory action for a morbid state.

M. Gendrin, whose name carries weight in such matters, states that he has often seen cases of ovaritis and uterine engorgement, and metro-peritonitis, caused by deep cauterization, and in some instances even by the use of the nitrate of silver to the neck of the womb, or by styptic injections.

But we have not only to fear the propagation of inflammation on account of the idiosyncrasy of the patient, or from the injudicious use of active escharotics, but likewise from the employment of various mechanical means which have been lately invented, and are now so much in vogue. The ordinary pessaries effect no good purpose, while they give rise to great irritation, and are as irrational as they are disgusting.

We agree with Dr. Hervez de Chegoin, that sometimes retroversion of the womb, by its pressure on the ovaries, may greatly irritate them; but we think Dr. Rigby has exaggerated the importance of this cause of ovaritis, and that in many cases the use of the stem-pessary, without curing the retroversion, prolongs ovarian and uterine irritation. We have so often seen this to be the case, that, without denying the good results which may have followed the use of the stem-pessary in more skilful hands, we do not intend again to employ it. And when we remember that many of the uterine de-

viations and flexions are *congenital* (as Mr. Jobert de Lamballe has well proved,) and therefore beyond the pale of treatment, or else of so long a standing that they cannot be permanently *redressed;* and that in the majority of cases they are perfectly *harmless*, (a fact which has been lately brought into the strongest relief by Professor Paul Dubois, Hervez de Chegoin, and been received without contradiction in the important discussion on uterine disease now proceeding in the Académie Nationale de Médecine)—finally, when we consider the mischievous effects often entailed by the employment of the stem-pessary, and the fatal result it determined in the case reported by Mr. Bransby Cooper, we think our resolution is well-founded, and, using the words of an anonymous writer, we are tempted to say, "that it is scarcely consistent with right principle to seek a doubtful good by means which have been proved to be fatally dangerous even in well-skilled hands."*

* It is no longer necessary to advocate the use of the speculum when the inspection of a hidden sore becomes urgent; for with regard to the indelicate in medicine, it depends solely on the intentions of the operator, and never on the nature of the operations it may be necessary to perform. We shall *now* have to guard against its too frequent use. We have heard of practitioners in this country who submit their patients to speculum examinations daily—nay, twice a day! O tempora, O mores! With regard to caustics, it would be also useless to deny the evils produced by these when handled by imprudent or inexperienced men. Retention of menstruation has been produced by the cauterization of the external portion

Dr. Rigby thinks that retroversion, when of long standing, is capable of producing ovaritis by pressure on the ovaries, particularly the left, and also by the strain on the broad ligaments, and the consequent obstruction to the returning circulation of the ovary.

Dr. Oldham in discussing this subject, says, "I have never met with a single instance of this de-

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of the os uteri, adhesion not unfrequently having taken place between the external portion of the os uteri and the vagina, causing the close adaptation of the orifice of the os uteri to the sides of the vagina. It is then necessary to destroy the cicatrix, but that is the least part of the matter, the greatest difficulty in the treatment being to hinder the edges of the wound from again uniting, as in a case published by J. P. Frank. This has been shown by Dr. Bernutz, who, after alluding to the cause of retention here indicated, remarks, "But these are not the only cicatrices produced by these cauterizations, of which so extensive a use is now made; the excretion of the menstrual flow from the neck of the womb is often rendered difficult, and sometimes impossible, by cicatrices (coarctations) situated at the inferior orifice of the os uteri, and even in the higher position of the canal."—(*Archives Gén. de Méd.*, Feb. 1849.) We shall take this opportunity of observing that with respect to uterine pathology, we can no longer taunt our Gallic neighbours with the rashness of their treatment, nor vaunt the sterling good sense which used to characterize our own; for in London practice we hear of such rough handling of the uterus, such probing and skewering of this organ, even by gentlemen of great ability, that we are obliged to recognise their belief in the insensibility of the uterus, and to express our hope that the patients do not get worse when subjected to such energetic interference. (This remark of the author appeared in *The Lancet* long before the publication of Dr. Oldham's memorable case in the *Guy's Hospital Reports*: see p. 138 of this work.)

scription, and I think the opinion is made to square with Dr. Rigby's views of the advantage of mechanical relief in these cases."

As we have already stated, we think that there is some exaggeration on both sides. We have met with a few cases which confirm Dr. Rigby's views, and some of his own cases are, we think, conclusive; but, on careful perusal of them, we could not help being impressed with the belief that the use of the stem-pessary sometimes brought on relapses of ovaritis, and increased the profuse menstruation.—Vide *Med. Times*, December 1, 1849.

With regard to the metrotome, although we are ready to allow that some patients have derived benefits from its use, and that in others it has not caused any serious illness, still we see few cases in which its employment can be necessary; and the highly instructive case lately published by Dr. Oldham, in the Guy's Hospital reports, shows how fatal may be the result of an operation, even when its performance is in the least warranted by the nature of the disease; for, in that case, the uterus was sound, while the ovaries and Fallopian tubes were evidently inflamed, one of them being obliterated.

Drastics have been said to assist in the production of ovarian disease, but we are not aware of the *facts* on which such a statement is based.

Siebold thought that abortive remedies had a decided influence on the production of ovarian

disease. The mention of such an opinion or the suggestion that such remedies as ovarian specifics might possibly exist, would a few years since have been treated as absurd; but, after the light which has now been thrown on ovarian physiology, it behoves us to inquire whether or not the action of ergot of rye, savine, or cantharides, is solely confined to the uterus, or whether such medicaments do not primarily influence the ovaries, which, by reacting on the uterus, incite its contractions?

SPECIFIC CAUSES.

We consider as such the puerperal state, the rheumatic diathesis, and blennorrhagic infection.

PUERPERAL OVARITIS.

"The structure of the ovary is never so well exhibited as in women who die immediately after confinement," says Professor Roux; and his statement is justified by its increased size, the diminished density of its structure, and the greater development of its blood-vessels,—circumstances which give to the ovaries of puerperal women a spongy texture, and no doubt predispose them to that inflammation, of the frequency of which we have already given ample statistical proof. Another cause is the peculiar state of the fluids, from which the milk, a new product, must be secreted, and likewise the increased flow of blood to the generative

system. We think another very important cause must be deduced from the function of the Fallopian tubes, or oviducts, as they should always be styled. They are the means of conveying the ova and a portion of the menstrual discharge from the ovaries to the uterus. They convey the semen (by a species of capillary attraction) from the womb to the ovaries: they have been known to transmit pus from the ovaries to the womb, and may be likewise supposed to transmit blennorrhagic pus, and in some cases of puerperal fever, pus, from the womb to the ovaries or to the peritonæum.

We have already alluded to the mechanical irritation of the ovaries produced by turning, by the application of the forceps, and by the pressure of the head of the child, operations most frequently required in primiparæ and those who marry late in life; neither ought we to forget that Dr. Henry Bennet has remarked a predisposition to pelvic abscess and puerperal fever in those who have ulceration of the uterine neck, for it is easy to understand how inflammation may thus extend from a point already inflamed. There is also another cause of puerperal ovaritis which was formerly considered the only one—namely, the sudden suppression of the milk. If it be absurd to admit, with Guillemeau, Mauriceau, or Puzos, that in puerperal tumours it is the milk secreted in the mammary glands which is deposited in the broad ligaments, it seems to us

equally absurd to shut our eyes to the fact, that sometimes, when a patient is doing well, the sudden suppression of the mammary secretion from cold, or from other causes, is followed by the immediate development of tumours in the broad ligaments. What we know of the intimate sympathetic connexion existing between the ovaries and the breasts enables us to understand how the suddenly suppressed action of the mammary glands should excite the ovaries. "Mulieri si velis, menstrua sistere, cucurbitula quam maximam ad mammas appone." (*Hippocrates, Aphor.* 50, sect. 5.)

Do we not see similar reactions between organs bound together by less intimate ties of connexion? Are not the sudden suppressions of cutaneous eruptions frequently followed by some internal inflammation? The sudden suppression of the lochial discharge from the imprudent application of cold is likewise sometimes followed by metritis or ovaritis.

Blennorrhagic ovaritis is admitted by Ricord, Vidal de Cassis, and other Paris surgeons, as a result of blennorrhagia, occurring under circumstances similar to those which produce swollen testicles in the male when affected with gonorrhœa. Our friend Mr. Acton takes the same view, and states, that in his long experience of the Paris venereal hospitals, he has had opportunities of observing these metastatic inflammations from the

uterus to the ovaries. Some of the French surgeons even go so far as to affirm, that only in cases of blennorrhagic ovaritis is it possible to assert that inflammation of the ovary has been the point of departure of the pelvic tumour. Notwithstanding these assertions, other eminent practitioners consider the disease as one of very uncommon occurrence, and Dr. Simpson states that he has carefully sought for blennorrhagic ovaritis in some hundred cases of gonorrhœa in the Lock Hospital of Edinburgh, but met with only one, and that a doubtful case. But at the Hôpital Cochin, in Paris, Nonat has repeatedly seen painful swelling of the broad ligaments appear during the course of blennorrhagia.

Rheumatic ovaritis.—We shall hereafter give a case in proof of the possibility of this variety, which is, however, very rare.

We have thus passed in review the causes of ovaritis, whether of the sub-acute or the acute, kind, and in so doing we have unavoidably described the cause generally assigned by authors to suppressed menstruation, dysmenorrhœa, and hysteria. Is not this an additional proof that the groups of symptoms described under these names often depend upon ovarian inflammation? Are not their symptoms those of sub-acute ovaritis?

CHAPTER III.

SYMPTOMS OF SUB-ACUTE OVARITIS.

When we consider the physiological conditions of menstruation, and inquire into the symptoms by which it is attended, we find that in some women this species of parturition is not productive of more pain than is the act of oviposition in the fish. Generally speaking, however, it is preceded and accompanied by certain symptoms, which present the diminished but faithful portraiture of what has been called uterine disturbance,—sense of fulness in the pelvic region, pains in the loins and in the ovarian regions, pains of an expulsive character, and therefore well termed bearing-down pains, for they typify the labour-like pains of a similar nature, by which a fœtus may one day be expelled. These do not depend on any mechanical pressure, but are merely nervous, and owe their existence to the communications which have been shown to exist between the hypogastric, uterine, and spinal nerves, distributed to the surrounding pelvic viscera, and are often accompanied by heat and swelling of the organs of generation, by cephalalgia, plenitude

of the pulse, and other signs of fever. These pains are often extraordinarily aggravated; and when this is the case, we may infer that the ovarian excitement is passing from the physiological to the pathological type. This inference is confirmed by an increase of heat, often remarked over the site of the ovary, when examining with the hand, or by the finger, during a vaginal exploration. Morbid ovulation, with its attendant uterine symptoms, having once taken place, there will be a tendency to its repetition at each succeeding period; thus giving pertinacity to a disease, which, in any other organ, would cease by degrees.

We have already presented the statistical data which Dr. Brièrre de Boismont has given us (in his remarkable prize essay on menstruation), whereby we can appreciate the frequency of these symptoms of menstruation.

We shall first give the symptoms which are *common* to ovaritis under all its forms, and afterwards sketch the peculiar phenomena with which they may be allied, and by which the local disease itself is often masked, causing it to be neglected.

The patient experiences a dull pain in the ovarian region, often imperceptible when she is in a state of repose, but brought on by walking, riding, by any sudden movement, or even by pressure on the side. The pain is also increased by the act of straightening the thigh upon the pelvis, as in the

erect posture, by which the integuments are put upon the stretch, and pressure is thus exerted over the part. Some patients are unable to maintain the erect posture without resting the foot of the side affected on a stool, so as to keep the thigh more or less bent upon the pelvis, whereby the integuments, &c. are relaxed. Radiating from the ovarian region, the pains are felt across the loins; they descend towards the thighs and fundament, and are of a dull, dragging, heavy, and sometimes of an overwhelming nature. They are distinguished by the patient from other pains resembling colic, and which depend on uterine contractions, although both species of pain may be experienced at the same time; they are likewise to be distinguished from those *superficial* pains which are caused by reflex nervous action, and which so frequently accompany every species of disorder of the organs of generation. They are, however, seldom so acute as to induce the patient to seek for advice. She may submit to them for years, but should she find them so wearisome to mind and body as to be led to seek advice upon her case, she is frequently treated for uterine disease. This is owing to the opinion, adopted by Hippocrates, and still too implicitly believed, that the uterus is the principal organ of the generative system, and that to the morbid condition of this organ are to be attributed almost all the sufferings of women. Should the patient be married, connexion awakens and renders

more or less acute the pains we have described. Ocular inspection, and an attentive manual examination, however, will, in some instances, prove that it is not painful when touched, nor does it present much appearance of disease. In sub-acute ovaritis, the hands placed on the iliac regions can sometimes detect an increase of heat; but these symptoms of ovarian inflammation are overlooked, or attributed to disease of the womb, inflammation of its neck, or to that scape-goat of uterine pathology, only known in England, and called irritable uterus—a disease regarded as neuralgia by some, as a form of dysmenorrhœa by others, and which, having the same symptoms as sub-acute ovaritis, we suppose sometimes to be one of the legionic names of that disease. The late Dr. Ingleby noticed that the descent of the ovaries on the vagina produced in one of his patients all the symptoms of the disease called irritable uterus.

Twice have we seen pain and swelling of the left side coinciding with pain and swelling of the left ovary, and this has aided us to a diagnosis. Should, however, medical advice be asked in cases of sterility, or when tenesmus, a desire of passing water, or an inability to do so, alarm the patient—or else when the bearing-down pains and impossibility to pass the fæces cause the medical attendant to fear stricture of the rectum, then we sometimes discover, by a vaginal exploration, an increase of heat in the upper portion of that passage; but unless the

ovaries are considerably swollen, their increase of dimensions will not be detected by this mode of investigation. It may, however, afford an indirect intimation of diseased ovarian action: thus, if one of the ovaries be inflamed, the patient's sufferings are greatly increased by forcibly inclining the neck of the uterus towards it, so as to direct the fundus uteri to the opposite side. The exasperation of the patient's sufferings is then caused by the stretching of the inflamed broad ligament. If both ovaries are inflamed, slight lateral movements, communicated to the uterus by its neck, will greatly increase the pain felt in the ovarian regions. More direct evidence may, however, be obtained by a rectal exploration, for then the finger reaches the ovaries, and finds them more or less painful on pressure, which is not the case when these organs are in their healthy state. They are found to vary from twice to four times their original size.

The most painful sufferings are produced by the descent of the ovarian swelling, of about the size of a small apple, into the recto-vaginal cul-de-sac, thus impeding defecation, or bearing down the uterus, so as to produce its complete retroversion. Such cases have been noted by Boivin, Denman, M'Intosh, and Dr. Rigby. Are we to admit, with Dr. Rigby, that a difference of symptoms depends on whether the anterior or posterior half of the ovary be the seat of the affection—the symptoms of derangement of the bladder being chiefly observed in the

former, and those of the rectum in the latter case, thus enabling us to form a more correct diagnosis as to the precise nature and situation of the disease, and to arrive at greater certainty as regards the plan of treatment? General symptoms are sometimes absent, but in the more acute cases the local signs of inflammation are accompanied by slight fever at night, thirst, and a furred tongue, nausea, and sickness.

In treating of the causes of ovaritis, we laid peculiar stress on what, for want of a better name, we called its moral causes, allowing them a greater importance than is usually conceded to them; but we cannot agree with those who admit the converse, and believe that nymphomania is a symptom of ovaritis; and when we find such an opinion supported by Carus, Mende, Lowenhardt, and Madame Boivin, we can only look upon the fact as an additional proof of the strange jumble that has been made of ovarian pathology. We might just as well admit, with Bertrandi, a disciple of Valisnieri, that furor uterinus is the result of the too rapid development of ovarian vesicles, or of there being too many of them formed at once. In the cases observed by the writers above named, there must have been some complication to explain the erotic impulse, such as a concomitant irritation of the external organs of generation, or of that portion of the brain which propels to the satisfaction of desires first made known to the female

when ovulation commences, and which are only felt by her so long as the monthly process of ovulation continues undisturbed. In the cases that have come within our own observation, far from giving rise to nymphomania, the disease, on the contrary, has had the effect of deadening all sexual feeling; and when ovaritis is more intense, the pain by which it is accompanied is of too alarming a nature to permit sexual intercourse to be received with anything but repugnance.

We have seen how great is the frequency of puerperal ovaritis, but we cannot too much impress upon our minds how insidiously it supervenes, how often it creeps on for days under a mild form, and that it is necessary to ascertain daily, by pressure on the abdomen of the recent mother, whether inflammation menaces.

The puerperal variety of sub-acute ovarian inflammation is not generally admitted, but its symptoms have been so well described by Dr. Doherty, in his short but able paper, that we shall use his own words:—

"The affection to which I would now beg to direct attention is stealthy in its nature, and usually makes its approaches so gradually, that for a long time the existence of any local malady may be unknown to the patient herself, who thus permits it to remain unheeded week after week, until it has perhaps laid the foundation of organic changes

which it may be ultimately out of our power to remove. To this disease I have heard Dr. Kennedy, to whom I am indebted for my knowledge of it, (for I have in vain sought in books its accurate delineation,) given the name of secondary inflammation, by which he meant to imply the usually late period of its occurrence, and not that it must necessarily be preceded by a more acute or other morbid process. It is not my intention to deny that the local changes which I am about to detail may result from, or be, as it were, the remnant of, a more intense degree of inflammation; but the fact I wish to demonstrate is, that the appendages of the uterus are liable to become the seat of an inflammation, but feebly announced by symptoms from the very first, and occurring after the period during which the parturient female is usually considered obnoxious to such attacks.

"The history of these cases is generally as follows:—The patient has probably had an easy labour, and her progress been so favourable, we have ceased our attendance; or if an hospital patient, she has been dismissed on the usual day, free from complaint. Convalescence proceeds uninterruptedly for some days, or even weeks; but after exposure to cold, she is seized with shivering, succeeded by hot skin and quick pulse, and a dull weight about the pelvis. After a few hours the feverishness disappears, and although some un-

easiness still remains about the lower part of the abdomen, it is not sufficient to excite any apprehension in her mind, and thus a considerable space of time may pass over. Febrile paroxysms, however, recur at intervals, and at length becoming more frequent, and stiffness and pain being felt on moving the leg of the affected side, she again applies to us for advice."

By a careful examination, the local disorders already described will be detected; but the ovarian congestion will be more considerable than in the idiopathic variety, and will be accompanied by considerable sero-purulent infiltration of the adjoining cellular tissue, and even of the vagina, which gives to the finger the sensation of a dense brawny substance, particularly in its anterior curve.

We have described the *common symptoms* of sub-acute ovaritis, but the same morbid lesions are attended with different accessory symptoms in different women, according as they react on a womb more or less excitable, on a nervous system differently prone to respond to irritation, or on fluids, more or less or differently vitiated by the unknown causes of scrofula, &c.

We shall, then, briefly consider the possible types of sub-acute ovaritis, premising that if sometimes we are allowed to guess at their cause, they frequently can only be attributed to some hidden

constitutional peculiarity; and we remind our readers that we have distinctly disclaimed all intention of considereing amennorrhœa, dysmenorrhœa, sterility, and hysteria, as being always and only produced by sub-acute ovaritis. They are not its necessary, but its *possible* symptoms. And in this conviction we are happy to meet with the support of a reviewer, who in an excellent article, (*Brit. and For. Medico-Chirurgical Review*, Jan. 1850,) observes, that "Amenorrhœa, dysmenorrhœa, menorrhagia, are more intelligible as the effects of pre-existing inflammation than as the derangements of a function."

AMENORRHŒAL TYPE.

When sub-acute ovaritis attacks the patient previous to, or in the midst of, the menstrual flow, it may be arrested, or prevented; but an inflammatory tendency is thereby originated. In such cases, one or several applications of leeches not only relieve the pain, but have been frequently known to bring about the immediate flow, or the return of menstruation. But if, under the influence of the morbid stimulus, the ovaries draw to themselves the blood they usually cause to be propelled from the uterus, the disease may give rise to the local symptoms previously described, and may likewise be accompanied by chlorosis. Chlorosis is generally admitted to be an affection of the organic

nerves, which preside over nutrition; and this opinion is confirmed by the recent experiments of Dr. Jolly, (*Revue Med.*, Dec. 1849,) who has shown that the effect of the section of the pneumogastric nerve was to defibrinize the blood. This peculiar state may, no doubt, gradually arise, without being determined by any ovarian or uterine inflammation—a condition which, on the contrary, with P. Frank, we ascribe to an arrest in the normal evolution of the ovaries, which deprives the whole of the female organism of that sexual stimulus which is indispensable for the health of both sexes.

But all the authors who have studied this disease admit, with Frank, Wendt, Andral, and others, what they call chlorosis florida, or cholorosis fortiorum, or chlorosis stenica. Cullen, Broussais, Brièrre de Boismont, and ourselves, have seen in the midst of perfect health chlorosis supervene, in consequence of sudden suppression of menstruation, accompanied by phenomena which lead us to admit a high state of ovarian engorgement. Subacute ovaritis produces in these cases what an arrest of development produced in the first; and deprived of that stimulus which they derive from the sexual organs, the functions of nutrition languish, and must be supported by tonics and steel; whilst the ovarian turgescence which occurs, requires to be treated by leeches, blisters,

and the other measures recommended. Alluding no doubt to cases similar to those we have seen, Dr. Copland says, "The ovaria may be so changed by inflammation as to be incapable of exciting the vascular activity of the uterus, so as to produce the menstrual discharge; but these changes are rather inferred from the history of former disorders than manifested by existing phenomena."—(Copland, Dict., p. 841,)

And lately, Dr. Martin Duncan (*Provin. Med. and Surg. Jour.*, Oct. 1849) has expressed views so similar to ours, that we are pleased to make use of his own words:—"The propriety of attending seriously to the symptoms of congestion of one or of both ovaries, as rendered evident by thrilling pain a little above the centre of Poupart's ligament, accompanied by tenderness on pressure, and increased by the erect posture, ought to be strongly insisted upon. Whether the pain be constant or intermittent, returning at, or exacerbated during, the monthly crisis, accompanied by menorrhagia, or co-existing with amenorrhœa and chlorosis, it should receive our urgent consideration; for when an organ has been congested for any length of time, such a state is difficult of eradication—morbid changes rapidly occur, and irremediable mischief results. Theoretical as well as practical data lead us to suppose that ovarian disease may be prevented by the timely exhibi-

tion of constitutional remedies, and local applications."

DYSMENORRHŒAL TYPE.

The frequent dependence of painful menstruation on sub-acute ovaritis has been generally recognised, and is now admitted by Drs. Oldham, Rigby, Ashwell, Coley, and others too numerous to recount.

In addition to the symptoms before described, the intensity of the pain becomes most distressing, and it frequently commences several days before the impeded menstrual flow, showing that the pain does not depend on its arrest, but on the effect of ovulation supervening upon a morbid process going on in the ovaries. This assertion is confirmed by Dr. Ashwell, who says, "Dull and heavy pains in the region of the ovaries, lasting for months, are the consequence of their chronic (sub-acute) inflammation. I mention the circumstance, because they are too often regarded as neuralgic, and treated accordingly, painful menstruation and sterility being their results. If any constitution is more liable than another to this termination, it is also the lymphatic, or that which coincides with a marked predisposition to scrofula."

The action of sub-acute ovaritis in the production of dysmenorrhœa is twofold.

1. Sub-acute ovaritis may of itself produce

dysmenorrhœa, as a simple result of the process of morbid ovulation, and not by the agency of any appreciable inflammation of the womb, or of its neck, and without any appearance of false membrane in the catamenia. This is what we have seen, and believe to be frequent.

2. Ovaritis, as Dr. Oldham has well shown, often causes dysmenorrhœa by determining hypertrophy of the uterus, inflammation of its neck, and a diptheritic exudation from its mucous surface. We know that the ovaries, in virtue of their governing influence over the uterus, induce periodically a state of vascular turgescence in the walls of this organ; and it is not surprising to find that ovaritis frequently induces the exaggeration of this physiological state, or the inflammation of the inner surface of the womb and of its neck; thereby transforming the thin, transparent mucous membrane of the womb into a thick, soft cribriform membrane, and producing the retention or painful excretion of the catamenia, which are mingled with pseudo-decidual membranes.

We cannot refrain from giving a passage from Dr. Oldham's interesting observations :—

"The uterine decidua is formed under the influence of an action going on in the ovary, so the membranous dysmenorrhœa is not primarily an affection of the womb, but of the ovary. In healthy menstruation the congestion of the ovary, the en-

gorgement of the womb, the opening of the veins on the surface of the cavity of the womb, and the flux of blood, are all in harmony, the latter being, so to speak, the resolution of the former. But when the ovaries are unduly excited, as, for instance, from the prevalence of one or more of the numerous ways in which sexual feelings may influence them, then the uterine glands sympathetically enlarge, the lining membrane of the womb becomes raised, and the body of the womb swells out. This change in the mucous membrane goes on during the interval between the monthly periods, and when the flow begins, the new formation is cast off, and the uterus, in the act of detaching and expelling it, becomes the seat of very painful contractions."—(*London Medical Gazette*, Dec. 4, 1846.)

MENORRHAGIC TYPE.

It is impossible to say why certain cases of subacute ovaritis should be attended by scanty menstruation, while in others it is accompanied by its profuse flow; the latter have been met with, generally speaking, in women of irritable, nervous constitution, in whom the uterus seems most liable to engorgement. Mr. Elkington, Chereau, and others, have exemplified this type. Dr. Martin Duncan, of Colchester, informs us that he frequently meets with it. We have seen two cases,

and we have found them very tedious and obstinate, until the ovarian disease was attacked by the remedies we are about to recommend.

A remarkable case of this disease was published by Dr. Rigby (*Med. Times*, 15th Feb. 1845), and we give the pith of it, as condensed by himself:—

Case 4.—"Ever since the first commencement of menstruation, Mrs. L. has suffered from severe dysmenorrhœa, produced by a long closed state of the os uteri; the result of which has been accumulation of menstrual fluid in the uterus at these periods, which was only able to expel it after severe and painful contractions. For nearly thirty years of her life has this source of suffering and severe uterine irritation continued, until the left ovary has ultimately become inflamed and enlarged. It has thus formed a considerable mass, pressing upon the uterus and rectum, and thereby obstructing a free return of blood from these organs; the consequence of which has been menorrhagia to a most severe extent for the last few years, seriously breaking up the general health.

"There are no traces of uterine disease.

"By the use of antimonial ointment to the left groin, and by leeches to that part of the rectum against which the swollen ovary projects, I have succeeded in diminishing the lancinating pains in the left groin, the sense of distention and pressure

in the pelvis, particularly upon the rectum, and the profuseness of the menstrual discharge, the last appearance of which was *without coagula*.

"The ovary, as felt *per rectum*, is less painful, softer, smaller, and less throbbing.

"Previously to the last menstrual period, I gently dilated the os uteri, in order to facilitate the discharge of the catamenia.

"The system is very irritable; slight opiates and purgatives are apt to produce over-effects.

"My practice has been simply to regulate and improve the general health, and to keep up a gentle action by antimonial ointment upon the left side.

"Within the last few weeks I have had again an opportunity of seeing my patient, during a short visit to London. Her appearance is remarkably altered for the better. She has grown robust, has a good colour; is able to take active exercise, and is enjoying a state of health to which, for a large portion of her life, she had been an entire stranger. She has lost all former symptoms, even the pain in the left hypogastrium. There has been no return of menorrhagia."

HYSTERICAL TYPE.

The connexion between the organs of generation and the mind is as evident as it is unexplained. When the virgin becomes a woman, nervous symp-

toms often accompauy the change. This may be an aberration of the usual kind feelings of the girl, or uncontrollable impulses to do mischief, or downright insanity. We know too well how often the expulsion from the womb of its ripened fruit is attended by nervous phenomena—puerperal convulsions, epilepsy, mania: and we are thus led to understand how the parturition of the ovum by the ovary may be likewise attended by similar reactions, or else by such as, although less intense, are cognate, and which we call hysteria.

These symptoms of hysteria are known often to return at each period of ovulation, and to coincide frequently with dysmenorrhœa, which we have shown to depend on sub-acute ovaritis. They may appear for the first time as hysteria, or insanity at the final burst of ovarian activity, which sometimes occurs when menstruation ceases, and which predisposes to ovarian irritation.

Thus, Drs. Tyler Smith and Brièrre de Boismont have each seen several cases wherein hysterical and epileptoid attacks only came on at first menstruation and at the decline of life, and at each menstrual period, the nervous symptoms completely disappeared on the cessation of the menstrual flow; while Dr. Beau (*Recherches. Statistiques*) found that, out of 127 cases of hysteria and epilepsy, in thirty-five instances the origin of the disease coincided with menstruation.

Hysteria, a disease almost peculiar to woman in the reproductive period of her life, often attends menstruation or its anomalies, is often accompanied by a painful tension of the pelvis, and mucous discharges from the vaginia, which reminds one of the abundant flow of tears under the influence of sub-orbital neuralgia; and as, on numerous occasions, no other lesion is found to explain these symptoms in the dead body, except congestion or inflammation of the ovaries, we are led to believe that hysteria often originatcs in ovarian irritation. Given the nervous, irritable disposition alluded to, and the laborious elaboration and elimination of the first ovule, or the monthly repetition of the same function, the delay or the denial of the proper ovarian stimulus, and sometimes even its enjoyment—we shall find that hysteria is always connected with ovarian irritation, and often depends on sub-acute ovaritis; whether we consider the causes of hysteria, its symptoms, and the only lesions which are found when (as in some rare cases) the patient is carried off during its occurrence.

This theory of hysteria was first professed by Hippocrates; for in referring the disease to the womb, he referred to the generative organs of woman as they were then known. A more perfect knowledge of the physiology of generation has shown that these symptoms were erroneously attri-

buted to the uterus; and very lately Dr. H. Bennet has stated that he has seldom found inflammation of the womb to give rise to hysterical symptoms, and that when they do so occur, it is in women previously subjects to hysterics.

Dr. Tyler Smith judiciously suggests that although extensive ulceration of the neck of the womb does not of itself produce hysterical or epileptoid phenomena, we may still believe that ovarian irritation may cause epilepsy, for slight causes sometimes produce strong reflex action; tickling the fauces causes sickness; and by merely pressing the hand on the neck of the womb, Dr. Ramsbotham in one patient brought on an attack of epilepsy.

Vander-Viel, Moreau de la Sarthe, Lordat, R. Campbell, and Ferrand de Missol, give cases which show how the sudden suppression of menstruation has caused violent hysterical attacks; and as corroborative evidence, we find it mentioned in one of the reports of the New York State Lunatic Asylum, that many patients are attacked with insanity after long-contiuued menorrhagia.

The older writers, Vesalius, Riolan, J. N. Binniger, Riviere, Bonnet, and Lieutaud, have noticed morbid lesions of the ovaria in those who were much afflicted with hysteria, or who died after unsatisfied desires, (*passions contrariés*,) whose

ovaria were found more voluminous, and infiltrated with a sero-viscous matter, termed by them spermatic, on account of the physiological opinions, then current, respecting the testes muliebrum, as they were then called. Morgagni, ("Epis. Anat.," 46,) Rullier, ("Diss. Inaug.,") and Mr. Whitehead, *London Med. Gaz.*, 1847,) have each of them particularly described the swollen, congested state of the ovaries, in cases wherein patients were rapidly carried off by violent hysterical fits; and lately, Negrier has told us, that evident hysterical symptoms have been observed in all whose ovaries, on post-mortem examination, were found distended and injected. He even supposes that the over-distention of the membranous envelope of the ovaria, and the compression of their nerves, might, by reacting on the adjoining nervous plexus, produce the symptoms of hysteria. This is perhaps taking too mechanical a view of the disease; but we cannot help remarking that something analogous has been observed, in man, by Lallemand, Ricord, and Deville, in those cases of inflamed testicle, (orchitis,) wherein the rupture of the seminal vessels, by tubercles or pus, gave rise to delirium. We are able to support these views on hysteria by appealing to the authority of Frank, Copland, Columbat, and others, who admit, in their monumental works, that there is a relation of cause and between certain mild forms of ovaritis and

hysteria; and we are so fully convinced of this, that we cannot agree with Dr. Copland when he states, in another part of his work, that hysteria may also give rise to congestion and inflammation of the uterus and ovaries.

The following interesting case is extracted from Dr. Alexander Tweedie's system of Practical Medicine, (vol. iv.) :—

Case 5.—A young lady who had for some time been hysterical was attacked by peritonitis, from which she was not relieved by depletants, the pain subsided spontaneously, but soon after cerebral disorder arose. One day she exclaimed suddenly that flames were rushing to her brain, and fell down dead. On inspection, it was found that the cerebellum was pale; the cerebrum and its membranes slightly injected; the right side of the heart was completely gorged with blood. On the left side, however, not only was the ventricle quite empty, but spasmodically contracted; and this was looked on as the active cause of death. A rope of mucus hung from the os uteri. The Fallopian tubes were dark with black blood; several Graafian vesicles were ready to burst; the hymen was entire.

A case of similar kind is mentioned by Dr. Bright; the source of irritation, however, was a calcareous deposit in the fimbriæ.

The next case is still more extraordinary, and

reminds us that Madame Boivin has said, that the diagnosis of ovarian dropsy is sometimes aided by the coexistency of hysterical symptoms.

The following case, related by Dr. Bright, will be found in *The Lancet*, of July 22, 1848.

Case 6.—In May, 1847, I was consulted for a young unmarried person, aged nineteen, who had fallen down stairs a few days before—three days after menstruation. Of robust, well-developed frame, she was previously in the enjoyment of good health, with the exception of occasional hysterical attacks, and had been menstruating regularly for five years. After her fall she complained of great pain in the lower part of the back, and on the second day was seized with violent convulsive hysteria.

I saw her on the third day, and found her in a semi-comatose state. The pulse was quick, the skin hot, the left side of the thorax and abdomen, and especially the lumbar region, were acutely sensitive to the touch. She had also frequent hysterical convulsions. Fearing some injury to the spine from the fall, I applied sixteen leeches to the lumbar region, which bled profusely. An active cathartic was administered, and the hysteria treated by large doses of opium. Under the influence of these means the hysterical symptoms rapidly gave why, leaving behind them, however, great abdominal pain, especially on the left side;

an evident swelling in the left ovarian region, where the pain was greatest, and a general febrile state. I suspected the possible existence of phlegmonous inflammatory disease of the lateral ligament; but not feeling warranted in proposing a digital examination, I merely persisted in general antiphlogistic measures, directing, however, the attention of both attendants and patient to the dejecta. On the tenth day, about four ounces of pus were voided along with a motion. On examining digitally, I found at once a small, indurated, painful tumour on the left side of the uterus. She rallied rapidly, and soon became quite convalescent. At the next monthly period, however, she had a severe relapse, and notwithstanding leeches, cathartics, &c., matter again formed, and this time found a vent by the vagina. At the three following monthly periods she had relapses, although gradually less severe. When I last saw her, about three months ago, she was yet an invalid. On examination, no trace of the inflammatory tumour could be found, but there was still great local tenderness.

Another proof of the mysterious link which binds the organs of generation to the noblest faculties of our nature is furnished us by the great experience of our most esteemed friend, Dr. J. Conolly, who thus expresses himself in the Croonian Lectures (*Lancet*, Nov. 10, 1849) :—

"Bodily disease gives evident origin to mental delusions in many instances. Women of various ages, either at the monthly periods or on the cessation of the catamenia, and when labouring under some irritation or disease of the uterus or ovaries, are liable to imagine that an actual fire exists within them, that Satan has dominion over them, or that a deluge of flames is descending upon them. The mental symptoms ordinarily give way to treatment directed to assuage the bodily ailment. In one case, where an elderly patient had for some time attributed a fixed pain in the back to her having been seized there by the gripe of the Devil, at one particular period of her life, the patient was fully relieved both from the pain and the demonomania by the application of several leeches to the seat of the pain. For reasons which may be readily imagined, an irritable condition of the uterus often leads to melancholy, to self-accusations, to religious despair, and to a suicidal propensity."

Georget, and Brièrre de Boismont have noticed that insanity is often aggravated by menstruation, and that even in those who have not menstruated there is a monthly increase of mania; and it is well known that the reappearance of menstruation has often been immediately followed by the cure of mania.

Such are the facts and deductions which make us believe, not that sub-acute ovaritis produces

hysteria or insanity *per se*, but that, by a suggestive influence which it exerts over the cerebro-spinal system, it determines in some hysteria, or convulsions—in others, insanity.

We are not called upon to explain how the sub-acute inflammation of such diminutive organs can produce such serious results. At present it is an ultimate fact, and must therefore be admitted as such. Does it determine a morbid exaltation of the ganglionic nervous system? Does it, by reversing the centrifugal currents of the nervous influence, and by the condensation of these in the centre of the ganglionic system, the solar plexus, and semilunar ganglia, produce the habitual symptoms of hysteria—such as suffocation, and oppression of the thorax? Do these currents, by the rapidity of their passage, or the peculiarity of their nature, re-act on the cerebro-spinal system, so as to determine those phenomena of reflex action, delirium, convulsion, &c.? Are not these currents (supposing them to exist) sometimes sufficiently powerful to act, by their shock, on the cerebro-spinal system, and thus produce sudden death, unexplained by post-mortem examination? Let those who speculate on the mysterious probabilities of pathological phenomena ponder over these questions, and solve them to their hearts' content.

CHAPTER IV.

TERMINATIONS OF SUB-ACUTE OVARITIS.

STERILITY.

In advancing that the sub-acute inflammation of the ovaries and of the Fallopian tubes is a very frequent cause of sterility, we fear no contradiction. The ovary is the workshop of generation (Meckel), and its extreme liability to inflammation permits us to infer, that sterility much oftener depends on a morbid change of the ovary than on that of the womb. The contrary opinion is generally held: slight uterine lesions, the mere effects of ovarian irritation, are considered the primary cause of sterility, and are sometimes treated in a manner to endanger the patient's life. In proof of our assertion, as an authentic representation of many similar cases, which now remain unpublished by those to whom they occur, we shall lay before the reader, in a condensed form, the revelations which Dr. Old-

ham has lately made to the medical public (*Guy's Hospital Reports*, October, 1849) :—

Case 7.—A lady came from Jamaica to London. She was quite well; but she had been told by her medical attendant in Jamaica, that if she placed herself in the hands of some of the eminent London practitioners, her marriage might become fruitful. She did so; and a London obstetric physician, believing, with the Jamaica practitioner, that the opening of the womb was not sufficiently large, slit it up with a cutting instrument. The lady was then condemned to wear, amidst atrocious sufferings, the uterine stem-pessary. Acute peritonitis was brought on by this treatment, and the patient died. Dr. Golding Bird, who had been incidentally called in, gave the history of the case to Dr. Oldham, and requested him to open the body. Death had been caused by acute peritonitis. We give the post-mortem appearances of the uterus and appendages, as examined by Dr. Oldham :—"The uterus had been opened by a single oblique division of the anterior wall, directed from the cervix to the left angle of the womb. The uterus was larger than usual for the virgin; it was rounded on its anterior surface, and there was a bulging convexity of the posterior wall, which, with the general softness of the tissue, showed it to have been the seat of recent engorgement. The bloodvessels over the entire surface

of the uterus and appendages were injected with blood, especially the fimbriated extremity of the tubes, the ovaries, the broad and round ligaments. On the anterior surface of the body of the uterus were two small projecting fibrous tumours, the size of a large and small pea; the serous investment of them was highly vascular, the bloodvessels rising over them just like the calyx of the ovarian ovum of the bird. There was a similar more flattened growth in the posterior wall. The divided surface of the anterior wall showed its proper structure to be much enlarged (it measured in the body eight lines); the muscular structure was soft, and the veins large—a probe easily ran through them. The length of the united cavities was two inches ten lines, the canal of the cervix being one inch five lines. The mucous membrane of the cavity of the body was soft, slightly raised, and of a vermillion hue. Agitation in the water was sufficient to loosen and separate it. At the os uteri internum there was a zone of highly injected bloodvessels, broken only at one point; the circumference of this aperture was eight lines. The os externum had a clean, smooth edge, without any break or mark of division; its circumference measured one inch one line. The cervix had its characteristic markings, and the glands were empty of mucus. On the right side of the divided cervix, which would have formed the front wall, the ribbings were stretched upwards, enlarging the mesh-like

appearance, and towards the os internum some were lacerated transversely, and from this to the os externum the structure was more ragged than usual.—*The right tube.* The extremity of this tube was almost entirely closed as a congenital formation, the aperture being very small. When opened, the fimbriated end showed its characteristic rich folds of mucous membranes, which were much injected, and were covered with bloody mucus. The remaining two-thirds of the tube were apparently healthy—not vascular and pervious throughout. The right ovary, which was almost covered with lymph, was soft and large. There was a cyst, large enough to hold a small nut, on the uterine end of the ovary. The stroma was gorged with blood. There was only one puckered Graafian follicle; the surface of the ovary was thick and corrugated. The left ovary was irregular in its shape, a projecting mammillary portion coming out from its outer end. This, on being cut into, was hard and vascular, like the commencement of malignant disease; the ovarian tunic was thick and wrinkled, the stroma vascular, a few remains of Graafian vesicles, with puckered tunics, and some clots of different colours, black and brownish. The left tube vascular at its fimbriæ, healthy in its mucous membrane, and its canal pervious throughout. This tube passed into the uterus more directly than its fellow, which was more curved. The veins healthy, arteries healthy,

the right round ligament large and vascular, vagina healthy.

"This case affords," says Dr. Oldham, "a most instructive example of the dangerous effects of dilatation, even in experienced hands, and the great caution with which it should be undertaken. It shows, too, the difficulty of detecting the cause of sterility. In this case, I am sure there was no kind of morbid contraction, and that the os and cervix uteri, which were alone treated, had nothing whatever to do with the dysmenorrhœa or sterility, which were, doubtless, dependant on the atrophy of the ovary; and the congenital obliteration of the end of the right tube would have been sufficient to exclude the corresponding ovary from any share in the function of reproduction."

We have sufficiently proved, in our previous chapters, that the disease described by authors as dysmenorrhœa, is, in many cases, sub-acute ovaritis; and we need not dwell on the connexion allowed to exist between dysmenorrhœa and sterility, as two concomitant facts depending on each other, or on the same cause. The conclusions at which Neumann, Madame Boivin, and others, have arrived, as the result of their great experience, is, that "Sterility generally depends upon a morbid state of the ovary, slowly and insidiously developed, and giving origin to other ovarian disease;" and Hufeland, the patriarch of German medicine,

affirms, that "half the lifetime of those subject to dysmenorrhœa is devoted to suffering, while the remainder is blighted by sterility."

How does sub-acute ovaritis produce sterility?* 1, by accelerating the shedding of imperfectly-developed ova; 2, by the retention of blighted ova; 3, by impeding their transmission from the ovaries to the uterus.

1. We are sometimes consulted by delicate females lately married, who present all the *common* symptoms of sub-acute ovaritis, but in whom menstruation returns every three weeks, or even every fortnight; cases of what may be called *remittent* menstruation, wherein the recovery from one menstrual epoch is almost immediately followed by the recommencement of the same process. In such cases, the excitation of ovulation exceeds the limits of the physiological type, and the ovule is shed before it has acquired its full maturity. In other words, the ovule perishes by *ovarian* abortion in the beginning of its intended career, in the

* It will hardly be credited, that in the *English Midwife*, published as late as 1682, the doctor informs the midwife, (Mrs. Entrap,) that, among other kinds of barrenness, there is one "unnatural, that is diabolical; to prevent which authors have left several ways—as to carry St John's wort about them, which is called a driver away of devils; or a plaister thereof applied to the reins, with many others." Such then would have been our belief, if we had been born 168 years ago!

same way that it might perish, at a later period of its existence, by *uterine* abortion—an extension of the word abortion warranted by the similarity of the phenomena in both cases. We have thus ascribed a due importance and a precise signification to those lesions of the parietes of the vesicles which merely expedite the exit of the immature ovule from its ovarian utricle. But we are the first to admit that our explanation of the facts alluded to rest entirely on the truth of a relation of cause and effect between ovulation and menstruation—a relation which, however probable, has not yet been completely traced.

2. The blighting of the ova while they are still cantained in the Graaffian follicle cannot be denied. That De Graaff has not failed to point out this possible fate of the human germ, its disease, adhesion, and absorption, in the midst of the inflammatory action, will be readily admitted, and a positive proof may be seen. (*Med. Chirur. Trans.*, t. vi.) Dr. Edward Stanlen, on opening the body of a woman who committed suicide, found the left ovary voluminous, and on one of its sides a small elevation; in this elevation, but *under the ovarian peritonœum*, was a minute cyst, containing an ovum about the size of a cherry-stone—it adhered to the cyst in two-thirds of its circumference, and was distinctly formed of the chorion and amnion, but offered no trace of a

fœtus. A more common cause of sterility is to be found in the frequent inflammation of that portion of the peritonæum which covers the organs of procreation. This frequency has not been overlooked by Dr. Robert Lee. The adhesions, he observes, between the ovarian and the Fallopian tubes, which are so frequently met with in examining the bodies of women of different ages and conditions, prove that slight attacks of inflammation of the peritonæal coat of the ovaria are not of rare occurrence, and that their presence is seldom discovered during life. Dr. Carswell also bears witness to the frequency of these incontestable proofs of inflammation in the same region:—

"The adhesions which form between the uterus, Fallopian tubes, and ovaries, and the surrounding parts, are much more productive of serious effects than in any other region of the body; and in order to give additional importance to the study of them, I may observe that they are a not unfrequent, and certainly one of the most obvious causes of sterility. They produce, according to their situation and mode of attachment, either anteversion or retrovion of the uterus; they fix the Fallopian tubes in situations in which the fimbriated extremities cannot reach the ovaries, or they envelop the fimbriated extremities in such a manner as to render them quite impervious, (which is always the cause of dropsy of these tubes,) or lastly, they

cover the ovaries so completely that impregnation is rendered impossible."

We therefore conclude that, in many cases, of dysmenorrhœa is another name for ovarian peritonitis, and that sterility is often the result of the thickening of the peritonæum, of its being clothed with false membranes, and also of the destruction of the fimbria. And we believe with our friend Dr. Mercier, (who has lately published an interesting memoir on the subject,) that this inflammation occurs oftener than is generally supposed, and is transmitted by continuity from the womb by the Fallopian tubes; thereby explaining the frequency of sterility in prostitutes, amongst whom Parent-Duchâtelet says, scarcely six accouchements per thousand take place in the course of the year, (tom. i. p. 220.) We must also observe, that many women are steril from this cause, although they are not considered to be so because they have previously borne children. Professor Richerand has remarked, that generally young women who complain of sterility have suffered from previous attacks of "inflammation of the bowels."

3. It is generally admitted that, without being permanently obliterated, the Fallopian tubes may be blocked up by mucus; and, lately, Drs. Fleetwood, Churchill, Copland, Hamilton, and others, have admitted the fact. And it is evident

that such an obstruction must impede as well the descent of the ovum, as it does the ascent of the seminal fluid. Whether or not this condition furnishes any direct therapeutical consideration we shall leave for future investigation, and proceed to inquire whether sub-acute ovaritis produces disease of the womb, and by what means.

UTERINE INFLAMMATION.

We have seen that the governing influence exercised by the ovaries over the rest of the sexual system is amply proved by physiology; we have seen that by their spongy, vascular structure, and its periodical congestion, they are pre-eminently predisposed to inflammation. Still, however, many authors,—Nauche and Piotay, amongst others,—assert that the ovary was never idiopathically inflamed, but derived its inflammation from some neighbouring organ. We have, however, proved that the ovary may be primarily inflamed, and may also transmit a morbid stimulus to its dependant organs, instead of the physiological stimulus which impels the uterus to healthy action. The powerful influence of sub-acute ovaritis, as a great cause of congestion and hardening of the womb, has been shown by Drs. Oldham and Rigby. Under this influence, the uterine surface secretes membranes which, when compared with those cast off in cases of abortion, are found identical; but this is not all,

for the texture of the womb becomes altered. In recent congestion, the posterior wall feels soft, compressible, and painful to the touch, but after repeated engorgements the tissue becomes harder, more solid, very much like the tissue of an *erectile* tumour, or that of a fibrous growth. Thus enlarged, the womb becomes liable to retroversion, and sometimes even, when the womb is thus displaced, it excites inflammation in the neighbouring peritonæum, false membranes are formed which fix the womb, and an irreducible retroversion is the result.

That ovarian irritation may determine the engorgement of the neck of the womb, is proved by a case lately published by Professor Recamier, (*Gaz. de Hopitaux*, Feb. 12, 1850) :—

Case 8.—*Inflammatory swelling of the ovary, with an erectile* engorgement of the neck of the womb.*—We were consulted by Madame R.——, of Troyes, who for the last eight years had suffered considerably from ovarian irritation, attended by

* Professor Recamier's appellation of erectile tumours seems to be warranted by the late microscopical researches of Dr. Eugene Forget, (*Etude Pratique et Philosophique du Col de la Matrice;* Paris, 1849,) who has declared that the surgical neck of the uterus is covered, in its normal state, by a certain amount of erectile tissue, which is a continuation of that layer of the same tissue which lines the vagina. Mr. Quekett confirms this statement; but, as it is denied by Dr. Snow Beck, further investigations are necessary.

much pain in the right fossa iliaca. Sexual intercourse also produced intense suffering. Such had in general been the state of the patient's health, though it varied for better or for worse. On examination, we found to the right, a little above the uterus, an inflammatory tumefaction of the right ovary, about the size of a hen's egg, which was very painful, even if touched ever so gently. This tumour was distinctly felt by the double touch, the left hand pressing on the hypogastric region. There was also considerable erectile swelling of the anterior lip of the os uteri; little fever. We applied leeches to the right inguinal region, ordered poultices, baths, &c. &c. When the ovarian tumefaction was diminished, as there still remained some engorgement of the neck, it was cauterized three or four times, at four days' interval. After seven weeks' treatment, the patient returned home perfectly cured.

As an instance of the transmission of inflammatory action from the ovary to the womb, we shall extract a case from Duparque's classic work on diseases of the womb:—

Case 9.—In a woman aged 25, menstruation became scanty, and disappeared, the patient suffering from severe pains in the loins and in the left ovarian region. On examining her, I detected a very slight engorgement of the left angle and posterior lip of the uterus, but I found a manifest tumour,

about the size of a small egg, in the left ovarian region. The tumour was painful, and I thought it ovarian. Venesection, and the application of leeches to the neck of the womb, brought about, in the space of two months, a diminution of the uterine engorgement, but the ovarian tumour still remained the same. As the patient was too weak to bear any further loss of blood, I gave calomel, and ordered mercurial frictions to the inguinal regions, and in two months more she was quite recovered from both affections.

The following case strengthens still more the position we defend. It was taken by Dr. Letalnet, and communicated by him to Dr. Brièrre de Boismont. They both believe that the ovaries were primarily inflamed, and that inflammation was thence transmitted to the uterus; but we regret that the state of the ovaries was not minutely examined.

Case 10.—*Acute ovaritis; metritis; inflammation of the oviducts, and peritonitis.*—Mdlle A——, aged twenty-one, of a lymphatic temperament, menstruated for the first time, and without pain, when thirteen years of age. At seventeen she was affected with chlorosis; and the diminution of the menstrual discharge which then took place was accompanied with epistaxis. When in her eighteenth year, she felt, for the first time, a pain in the right ovarian region, which augmented

at each menstrual epoch; and when the lady was under the influence of cold, hysterico-epileptical fits constantly attended the menstrual flow, which, however, remained regular as to the period. She was afflicted with leucorrhœa, and a fissure of the anus, for which an operation was performed. At the menstrual period, which immediately followed this operation, she suffered considerably, and dysmenorrhœa became more and more considerable. The menstrual discharge, instead of being red, was now brown, then black, and at last ceased altogether to flow. When Dr. Letalnet first saw the patient, the hypogastric region was painful, the uterus was increased in size, heavy, and painful on being touched through the rectum. This uterine congestion was accompanied at all times by pains in the loins, but particularly whenever the menstrual discharge began to flow. The patient's breath was fetid, her respiration rapid; she would lose her senses during an hour or two, and afterwards remain in a lethargic state for thirty-six hours.

Notwithstanding the anæmic state of this young lady, bleeding (says Dr. Letalnet) was her only relief. The flow of blood was immediately followed by a decided improvement; and when the menstrual discharge appeared of its own accord, or was solicited by remedial means, the patient was sure to be well in two or three days. It was proved, not once only, but often, that venesection, or

leeches to the hypogastric region, brought on the catamenia and epistaxis in this highly anæmic lady, and put an end to the hysterical fits.

This case is not only interesting as an instance of the passage of inflammation from the ovaries to the uterus, but it also seems to confirm an explanation of hysteria, already suggested in one of our former chapters. Impeded or arrested menstruation is here followed by fits, which are called hysterico epileptic; but as soon as the menstrual discharge appears, the hysterical symptoms abate and disappear. The sanguineous current from the ovaries to the periphery is no doubt propelled and governed by some nervous current, of which the impetus is given by the ovarian organs, and which holds a course similar to that of the sanguineous current; and when these normal currents are arrested and reversed, the blood remains as a source of local disorder in the generative organs; but the nervous ovarian influence, when reversed, seems often to react on the cerebro-spinal system, thus producing hysteria.

Before proceeding further, we shall observe, that Dr. Blundell, in his practice at Guy's Hospital, used to take into consideration the coincidence of ovarian and uterine disease, and to consider it necessary to attack the inflammation of the ovary by leeches, so as to subdue that of the womb. Dr. Rigby affirms that he has never seen ovarian irritation to exist without coincident derangement of

the uterine functions; and in a discussion in a paper which we lately read before the Westminster Society, Drs. H. Bennet, Tyler Smith, and Sibson, and Mr. Brown, stated that they had observed the coexistence of ovarian and uterine inflammation, and their mutual influence the one upon the other; and on this point we shall appeal with pleasure to the great experience of Dr. Murphy, who informs us that, in several cases of dysmenorrhœa, he failed in relieving the patients while he addressed the whole treatment to the uterine elements of the case, (stricture or ulceration of the os uteri;) and that it was only after more minute attention, and on finding that in those cases painful menstruation depended on sub-acute ovaritis, that he was able to cure it by appropriate means.

We have seen similar cases; but, knowing how easy it is to distort facts by looking at them through the medium of one's own peculiar views, we are pleased to have the sanction of high authority when we advance even one case in support of what is not generally admitted.

Case 11.—A married woman, aged twenty-five, was admitted a patient at the Paddington Free Dispensary for Women and Children. She was small in stature, of a sanguine constitution, and she had been married three years without issue. She complained of pains in the abdomen, of a slight

discharge, and of dysmenorrhœa, with either a profuse or a scanty flow. On examination, we caused little pain by pressing the ovarian regions. The neck of the womb was sound in every respect. Considering that the general health of the patient was in fault, we gave opening medicine and tonics, and ordered injections with a solution of alum. This treatment was continued several weeks. The general health improved; the discharge almost disappeared; but the pains in the ovarian regions became worse, and dysmenorrhœa increased. We ordered inunctions with mercurial ointment, and poultices to the inguinal regions, and the pain abated. But a fortnight afterwards leucorrhœa reappeared, with pain in the back; and, on a second examination, we found an ulceration of the inner surface of the cervix, which was outwardly red and swollen.

We therefore admitted having taken a wrong view of the case. It was an ordinary case of ulceration of the neck; so we cauterized it with nitrate of silver—then, with the acid nitrate of mercury—and, lastly, with potassa fusa. Such was the treatment employed during the space of eight months, the patient being sometimes better, at others worse, and sometimes remaining without treatment for the space of three weeks. The ovarian pains likewise varied; but, three months ago, finding that they were very intense, being

augmented by walking or pressure, and tired by the pertinacity of the case, we made an exploration per anum, and found the ovaries swollen, and very painful when touched. We immediately changed our plan of treatment, and ordered ten leeches to each inguinal region, and the regular rotation of blisters and ointment, besides cold enemata twice a-day. The pains subsided, the leucorrhœa stopped, and, a few weeks after, the neck of the womb was merely congested, and offered no ulceration. After the succeeding menstrual period, we ordered a repetition of leeches, blisters, and ointment; and now the cervix is sound, the ovaries are painless, and the patient is well.

In this case, we think that ovaritis produced the inflammation of the neck of the womb, and kept it up until the primary disease was discovered and energetically treated. Now it seems to us, that if our explanation holds good, it will throw a light upon some of the anomalies of uterine pathology.

It is admitted by all those who have contributed to our knowledge in this department, that one of the characteristic features of diseases of the womb is their exasperating uncertainty. In some of those who suffer extremely, we find but very insignificant lesion; and when we have removed these, the patient sometimes suffers as much as before. Now, we may believe that, in some instances, these symptoms are but a morbid remi-

niscence in the nerves of the convalescent organ, and that a healthy excitement of the whole system is all that is wanted to relieve these particular nerves from their undue action, and to merge their morbidly independent excitement into general excitement; but in many other cases of uterine disease, as in that we have related, we cannot cure the disease of the womb, because we forget that beyond the womb, preceding the womb in the development of the organs of reproduction, and governing them through life, are the ovaries, which often participate in and cause that uterine inflammation which we alone attack; and thus, while we cure the small visible lesion, a hidden one remains, to bring on relapses and to perpetuate the patient's sufferings. In the treatment of those painful states of the neck of the bladder, so often caused by diseases of the kidneys, we depend much less on direct application to the neck of this viscus than we do on those means by which we can attack the kidney, the diseased organ. Should not we be governed by the same logic in treating diseases of the organs of reproduction?

Having shown what are the anatomical lesions of sub-acute ovaritis, its causes and symptoms, its types and terminations, we must now turn to the treatment of the disease—a more grateful task, as we shall be able to show that there is no lack of effectual remedial measures, and no difficulty in their application.

CHAPTER V.

TREATMENT OF SUB-ACUTE OVARITIS.

It is particularly necessary to bear in mind the peculiar functions of an organ when we wish to cure the diseases to which it is liable. As the ovaries are subject to a periodical excitement, and are the starting points of the nervous currents, which thence take their centrifugal course, determining in their passage the menstrual discharge, by which the regularity and intensity of these currents are manifested, we must admit, as a fundamental point of practice, the necessity of respecting the eccentric tendency of such currents, how great soever may be the patient's sufferings, and our anxiety to relieve them. The radical treatment of sub-acute ovaritis should not, then be attempted during the exacerbation produced by menstruation, but during the intervals between successive epochs. We shall exemplify the treatment which we have found successful by a case in point, and afterwards

offer our remarks on the various remedial measures we have been led to employ.

CASE 12.—*Sub-acute ovaritis producing sterility; cure followed by pregnancy.* When practising in Paris, in 1844, we were consulted by a gentleman, about thirty years of age, presenting every appearance of good health, who told us that his wife was in her twenty-fourth year, that at the age of fifteen she menstruated for the first time, but that this function had always been accompanied by pain, and was frequently irregular in the time of its appearance. He had been married five years, and since then the menstrual discharge had been more regular, but accompanied by a great increase of pain. She was seldom subject to leucorrhœa, but sexual indulgence was sometimes painful. For the last year, various means of medical relief had been tried; but with so little success, that her husband said he was not induced to consult us for his wife in the hope of our being able to relieve her monthly suffering, but to inquire if there were any remedy for sterility. The lady presented all the appearance of a lymphatic constitution; she looked delicate, but was apparently in tolerable health; she did not expect to be unwell for the next fortnight, and she was not then in pain; but on rapidly depressing the ovarian regions with the united tips of the fingers, we produced a pain similar to that she ex-

perienced when menstruating. On examining by vagina, we received an indistinct perception of a small tumour, which we took for the right ovary; but, on making a rectal examination, we distinctly felt both ovaries, each being swollen to about two inches in the long diameter. They were painful on pressure. Having ascertained the tumefied state of the ovaria, and their tenderness on pressure, and bearing in mind the previous history of the patient, we considered them sub-acutely inflamed. We determined, however, to do nothing previously to the next monthly period, so that we might judge of the nature of her sufferings, and afterwards have full three weeks to alleviate them. A few days after, she was suffering from all the symptoms of dysmenorrhœa; the pain, on pressing the ovarian regions, was greater; and, on examining through the rectum, the ovaria were found still larger and more painful. When the period was over, we began the treatment, by applying eight leeches over each ovarian region; the leech-bites being healed, we applied over the same region a blister, five inches in length; the cuticle was not removed, and three days after, when the skin was healed, we ordered the same region to be carefully rubbed for ten minutes, morning and night, with a portion, about the size of a walnut, of the following ointment: ung. hydrarg. ℥j, ext. belladonnæ ʒj, ext. hyoscyami ʒj, camph. (solut. in spirit.) gr. x; the

abdomen to be afterwards covered with flannel, without removing the ointment. We also prescribed enemata of aquæ camph. ℥xv, aquæ lauri cerasi, ʒvi; sometimes adding tinct. hyoscyami, ʒiii. A third of this quantity was injected into the rectum three times a-day, the chill having been first taken off, so that it might be as much as possible, if not entirely, retained. Due attention was paid to the regularity of the bowels, mercury being avoided, and saline purgatives preferred. For the first few days, until the blistered surfaces were healed, the patient left her bed only to recline on the sofa; afterwards she was allowed to take exercise as usual, and her strength was kept up by generous diet. Abstinence from the nuptial bed was strictly enjoined. On examining by the rectum a few days before the expected time, we found the ovaria diminished in size, but still painful to the touch. The next menstrual period was accompanied by the usual dysmenorrhœal symptoms; but the patient said that she suffered less than she had ever done since her marriage. When menstruation had ceased, we subjected her to exactly the same treatment, and her sufferings were again diminished during the ensuing menstruation. She submitted to the same course a third time; and, on exploration, we found that the ovaries had resumed their usual size, and that pressure was not accompanied by pain. The third menstruation

since the beginning of the treatment was attended by little pain. We discontinued the leeches, blister, and ointment, but advised the regular continuation of the enemata. We permitted cohabitation, at the same time recommending moderation to her husband. Four months after this, our patient was pregnant, and in due time was delivered of a fine boy.

Remarks.—The phenomena presented in this instance are not uncommon, as many of the cases called dysmenorrhœa are attended by them all. The treatment was, at any rate, rational;—local depletion, to diminish the ovarian congestion; blisters, to break the chain of morbid nervous influences (fostered by the long habit of suffering) in the organs of ovulation; mercurial ointment, narcotic extracts, and camphor, to reduce the pain and vascular excitement. The enemata were administered with the same intention. In another case, the symptoms of dysmenorrhœa were evidently caused by marriage. The patient was a young and delicate female, in whom was found the same ovarian swelling, and where similar treatment was employed; but we did not meet with an equal response in the way of attention to our advice. Her pains were, however, diminished, but relapses occurred. She was under treatment for six months, and, though she had been steril for seven years, she shortly afterwards became

pregnant. When residing at Rome, we were asked to attend a similar case, and we have since heard that the carrying out of our advice was followed by pregnancy, after six years of unfruitful marriage.

BLOODLETTING.

We have never found it necessary to have recourse to venesection, but have generally derived advantage from local bloodletting. We order leeches because they are as efficacious, if not more so, than cupping, and can be applied by the female attendant of the patient. With regard to the number of leeches to be prescribed, we must bear in mind, that by applying a small number (from four to six) we should only increase the state of congestion of the pelvic organs—a plan of treatment, in fact, daily adopted with the view of determining menstruation. We must, on the contrary, order a number of leeches sufficient to make a decided effect on the local inflammation (from eight to twelve.) They are ordered to be applied to the ovarian region, as much as possible over the seat of pain; and hot poultices or fomentations to be afterwards placed on the bleeding leech-bites. Whether, in these cases, any particular advantage follows the application of leeches to the os uteri, or its scarification, we very much doubt, on account of the uncertainty of the results; we think that,

even if it did afford sometimes any slight relief by the immediate depletion of the uterine vessels, such an advantage would be purchased at the risk of uselessly offending the patient's feelings by the untimely interference of a surgeon, by whom the application of leeches must generally be made. At other times, the bleeding is so abundant that it is necessary to plug the vagina. Neither is their application at all times without pain; and when the leeches have fallen off, the pain is sometimes excruciating. The mechanical irritation resulting from the prolonged application of the speculum, and the impossibility of withdrawing a considerable quantity of blood, must be considered also as drawbacks on this mode of application; and if there is any tendency to malignant disease, every leech-bite may be converted into a cancerous ulceration. For similar reasons, we likewise object to the application of leeches to that portion of the rectum which covers the ovaries; although this plan has been recommended by Dr. Rigby, who says, "When, on the other hand, symptoms indicate that the posterior part of the ovary is chiefly the seat of disease, four or more leeches should be applied directly to the ovary, by means of a tube to be introduced in the rectum."

At Paris, we have seen a continued flow of blood kept up for eight or ten hours from a small number of leech-bites. From one to three leeches have

been applied to the upper and inner part of the thigh, and when blood has ceased to flow from the bites, other leeches were applied. The number of leeches, and the frequency of their application, must be left to the discretion of the medical attendant.

PURGATIVES.

These are advantageously given, both to counteract all tendency to inflammation, and to remove from the vicinity of the ovaria all causes of mechanical irritation, such as scybala, and morbid intestinal secretions. The most cooling purgatives, the saline and oleaginous, should therefore be given, while drastics and aloes, which act as the peculiar irritants of the lower part of the intestines, should be avoided, except when they are indicated to help the flow of menstruation.

INJECTIONS.

These are most valuable addenda to the preceding remedial measures, though seldom followed by a full amount of benefit, on account of their not being administered with due attention. Their composition should be similar to that prescribed in the case given as an apt illustration of the plan of treatment which we have found to be successful. Sometimes, however, we have substituted the tincture of belladonna or of opium for that of hyoscy-

amus; and in England we have seldom employed the lauro-cerasus water, (though we think it a valuable remedy,) on account of the difficulty of obtaining it, and of the variation in the degrees of its strength. With respect to this administration of injections, the bowels having been previously opened, or else an injection of water having been made, four or five ounces of the tepid enema should be injected slowly into the rectum, the patient being told to retain it as long as possible, and lying on her back, so that the pelvis may be somewhat higher than the rest of the body. This injection should be repeated three or four times a-day; and when we consider that the liquid injected is separated from the inflamed ovaries only by a thin elastic and highly-absorbent membrane, it will not be difficult to understaud that enemata, thus carefully given, are productive of the greatest advantage. When the patient is cured, the medicated enemata should be discontinued, and replaced by cold water, to be likewise injected into the rectum morning and night,—by cold water, we mean that which has stood in an inhabited room, and which, when introduced, gives an impression of cold, without chilling the patient.

We do not know of any means better calculated to reduce the exaggerated ovarian irritation; and while treating of this subject, we may remark on the powerful effect of cold-water enemata in arrest-

ing a tendency to hysterical seizures, and suddenly removing them when they already exist. Is not this sudden cessation of alarming symptoms immediately after throwing cold water on the ovaria, an additional proof of these organs being materially implicated in the production of hysteria?

Vaginal injections are also useful. We agree with Cullerier, sen., and with Lisfranc, in ascribing no great utility to narcotic vaginal injections, which rather irritate the tissues than subdue their inflammation: they are, however, useful in the hysterical type, as stated by Brièrre de Boismont.

BLISTERS.

As soon as the leech-bites are healed, blisters, of four or five inches in length by three in breadth, should be applied over the ovarian regions. The blisters must be carefully camphorated, so as to guard against the distressing symptoms of dysuria.

The epidermis must not be removed from the skin, and the irritated surface should be healed as soon as possible. Whether the effects of blisters are to be ascribed to counter-stimulation, to the loss of serum, or to the direct sedative influence of cantharides on the blood and organs to which it is applied, according to the views of the Italian school, is difficult to say; but, in this instance, they probably act by breaking the chain of morbid

action to which the ovaries have become accustomed. They may attack the nervous element of ovarian inflammation, as in those cases wherein intense vomiting is suspended or cured by blisters applied to the pit of the stomach. The antimonial ointment, so strongly recommended by Dr. Rigby, operates in a similar manner, and might be prescribed, in case the mercurial frictions did not produce the desired effect. Dr. Rigby says—"I know of no application so efficacious as the antimonial ointment, well rubbed into the part,—and when the eruption comes out, applied by a piece of lint, until a slight degree of sloughing is produced. The only objection is, that the patient is occasionally attacked with nausea, faintness, and other symptoms, from the system having been brought under the influence of antimony." We consider this (in moderation) rather as an advantage of the treatment than as an objection to its use.

MEDICATED INUNCTIONS.

As soon as the surface of the skin is perfectly healed, we must have recourse to other means of relief. Before mentioning the applications we generally prescribe, we must remind the reader, that frictions on the ovarian regions have often been advantageously employed by Boivin and Duparcque in France, and by Granville, and doubtless by others, in England. Madame Boivin says, that

in several cases of inflammatory adhesions of the broad ligaments, accompanied by dysmenorrhœa, pains, constipation, and tendency to abortion, she relieved the patients by persisting in mercurial frictions over the ovarian regions; and she adds, that this treatment not only stopped the pains, but re-established the proper catamenial discharge, cured the ovarian irritation, and imparted to the uterus the power of retaining its fruit until it was in a condition to be brought forth alive. Dr. Granville has also cured the tendency to that species of miscarriage produced by ovarian irritation, by combining the internal use of castor-oil with mercurial frictions. We have derived increased benefit from mercurial frictions, by mixing narcotic extracts, such as extracts of hyoscyamus, belladonna, and opium, together with mercurial ointment, in the proportion of a drachm of the extracts to an ounce of the ointment. This is the most effectual means of allaying the pain, which is in itself a perpetual cause of irritation; and as camphor is acknowledged to have a cooling effect on the system, we combine it with the mercurial ointment, both on that account, and because of its anti-aphrodisiac properties. We may here remark, that Lisfranc had already noted the good effects of camphor in uterine disease, three or four grains being given in an enema.

We can safely recommend to the profession the use of the compound mercurial ointment; for at the

public institutions with which we are connected, it is our practice to prescribe it whenever a patient complains of deep-seated ovarian pains, (pains in the ovarian region, extending to the loins and thighs,) depending on deranged menstruation, or previous severe labours. In the milder cases, the pains subside after the ointment has been used for a few days; and in many others, when the pains had followed severe labour, had been considerable, and had lasted for two or three years, we have seen them disappear after a continuance in the use of the ointment for six weeks or two months. In some cases, the use of the ointment has been followed by the cure of a leucorrhœal discharge, from which the patient had been also an habitual sufferer. These facts have in themselves a practical value, whatever may be the explanation given of them.

It appears that in the Dublin Lying-in Hospital, frictions with iodine ointment are made, internally, to the roof of the vagina, in those cases which Dr. Kennedy used to call secondary ovaritis. We think the practice dangerous, for *certain* reasons, too evident to require enumeration; but we have sometimes employed, with benefit, the medicated pessaries recommended by Dr. Simpson. The medicated ball, being allowed to melt, its active components are enabled to exert a permanency of action in the generative organs. The following formulæ can be recommended:—Extract of bella-

donna, two drachms; camphor, ten grains; yellow wax, a drachm and a half; lard, six drachms.—Strong mercurial ointment, two drachms; extract of belladonna, one drachm; yellow wax, two drachms; lard, an ounce.—According to the circumstances of the case, they may also owe medicinal virtues to iodide of potassium, a drachm, or to acetate of lead, two drachms, for each pessary.

When administered with all due precautions, baths also are a useful means of cure, particularly to those endued with a nervoso-sanguine temperament. The temperature of the baths should be such as not to chill the patient, and the constant renewal of the warm water should so maintain it at the same degree of heat, that the patient may remain in the bath for at least an hour. The horizontal position is an important element in the treatment of diseases in the generative system. It must at first be strictly enforced, and afterwards recommended, for two or three hours in the middle of the day.

Is it necessary to say, that the general treatment of the patient should be such as will invigorate the constitution, without increasing the local irritability and determination of blood to the pelvic organs? The protection of the feet from damp is of course a point of great importance; but what is of still more consequence, in a fitful climate, is effectually to protect the pelvic organs by drawers,

so that the patients may be somewhat independent of our piercing easterly wind, of our cold, clammy atmosphere, and of all those sudden transitions of our own or of nature's making. If we dwell so much on a point which may seem of little importance, it is because we are firmly convinced, that by the use of means so simple the number and intensity of diseases of menstruation may be greatly diminished. Many of our countrywomen fancy that they would surrender a portion of their eminently feminine character by adding to their apparel an appendage considered masculine in this country—a prejudice that is naturally confirmed in them by the well-known proverbial expression, "she wears the breeches," by which discredit is sometimes thrown on both contracting powers of a matrimonial alliance. The physician should use his best endeavours to combat this unfortunate prejudice, and we trust his efforts in this respect will be more successful than they have been in the professional crusade against tight-lacing.

Should the patient be married, sexual indulgence must be prohibited so long as there are any signs of ovarian inflammation, and afterwards only permitted in moderation. We might enumerate many other things to be avoided, but in so doing we should be obliged to repeat the catalogue of the causes of sub-acute ovaritis, for a perusal of the chapter wherein they are set forth will show what are the

stimuli, moral as well as physical, which must be guarded against, and also the diseases which must be relieved previously to the removal of the sub-acute ovaritis they have entailed; we here allude to metritis, leucorrhœa, &c. Whether these arise from the propagation of inflammation by continuity of tissue, or whether they have been caused by the indiscreet interference of the medical attendant, they can speedily be cured by an active antiphlogistic plan of treatment; for the disease is not constitutional, but is communicated to the ovaries, as in other cases of accidental inflammation, thus widely differing from attacks in which it is idiopathic, and springs up of itself in some particular organ, as a proof of the contamination of the whole system, which then perpetually feeds the local disorder.

With regard to the treatment of the puerperal variety of sub-acute ovaritis, we cannot do better than to give a case published by Dr. Doherty, who was one of the first to draw the attention of the profession to this form of disease. The treatment already prescribed should be enforced with greater care, on account of the liability of the patient to more serious local disorder. Some have recommended that the mother should wean her child; but even if the supply of milk be diminished, it is more prudent to keep the mammary glands in a state of secretion, than, by arresting their action,

to add a further cause of deranged function, and of morbid excitement.

Case 13.—Margaret G——, aged twenty-six, the mother of one child, which had been born in the Dublin Lying-in Hospital a month previously, was readmitted on the 12th December, 1838, (during Dr. Kennedy's mastership,) into the ward in that institution appropriated to diseases of females. Her labour had been natural, and she had been discharged well on the ninth day. Four or five days after she had left the hospital, sickness of stomach and diarrhœa set in, and slight pains occurred in the lower part of the abdomen. Within the last six days before readmission she had occasional rigors, and the pain in the abdomen, particularly towards the right side, had considerably increased. She felt, too, great stiffness and pains when she attempted to walk, or even straightened her leg; pulse was 100, and soft. She slept generally till four o'clock in the morning, when she awoke bathed in perspiration; she had no difficulty in making water; her bowels had not been freed for the last two days. On examination, great hardness and general tumefaction were detected in the right iliac region; the roof of the vagina, as ascertained by the touch, was exceedingly resistant, and the uterus firmly bound down, so that the fundus was turned towards the right side, while the os was directed towards the left sacro-iliac synchon-

drosis. The plan of treatment adopted consisted in leeching, blistering, and the exhibition of Plummer's pill, and under it the iliac region became softer, and the vaginal roof seemed inclined to relax. Hydriodate of potash was then given, and iodine ointment applied internally to the roof of the vagina, while counter-irritation was maintained without. Her recovery was intercepted by her leaving the house for a few days, and shortly after her return—that is to say, on the 10th February—she had shivering during the night; next day her pulse was quick, there was considerable tenderness and tumefaction in the right iliac region, and the inability to stretch the leg was increased. During the night of the 12th, the pain in the right iliac fossa became exceedingly severe, so as to make her seize hold of the bed-post, and on the subsequent morning the tumour was found to have greatly increased both in size and tenderness; it formed a swelling equal in dimensions to a fœtal head; it was regular on its surface, tense, but elastic. By means of an examination per rectum, it was ascertained to consist of the inflamed ovary. One dozen and a half of leeches were immediately applied, and she was immersed in a warm bath; pills of Plummer's pill, James's powder, and opium, were given. On the morning of the 16th the tumefaction had considerably abated, and the report on the 18th was, "tumour can barely be detected. No

solid lumps came away, nor was there any reason to believe it to have depended on a fæcal collection; the pulse is quite quiet." From this period absorption appeared to proceed much more rapidly than before, and on the 10th of March she was dismissed, with the pelvic tissues restored to their natural condition.

With regard to the treatment of the different types of the disease, it will not be necessary to say much, as their cure must principally depend on the persevering employment of the measures already suggested.

AMENORRHŒAL TYPE.

Even when accompanied by its frequent attendant, chlorosis, leeches are indispensable; the loss of a small quantity of blood is amply compensated for by giving back to the system the full benefit of the stimulus it should derive from the healthy action of the sexual organs, and this will be effectually assisted by the administratien of tonics and steel preparations. The medical attendant's sagacity will be tested in his treatment of cases of this type, which he must be careful not to confound with those of another kind of chlorosis which we have shown to depend on the arrest of ovarian evolution; for in such cases antiphlogistics would do harm, while benefit would follow the use of local stimuli, such as warm plasters, blisters, and

of electricity, as has been proved by Dr. Golding Bird.

DYSMENORRHŒAL TYPE.

Cases of this description are most obstinate, and require to be attacked for months after each menstrual period, by the rotation of the remedies to which we have drawn attention; and under the annoyance of a prolonged treatment, we may still buoy up the patient's hopes by impressing on her that the ovarian disorder is such as permits us to believe that, in spite of her protracted sufferings, the integrity of the ovarian functions may not be seriously compromised. We once met with a case similar to that mentioned by Dr. Copland, when describing the most severe and obstinate instance for which he had ever been consulted, and still the patient had a family after marriage.

MENORRHAGIC TYPE.

In spite of the patient's weakness we must apply leeches, and thus break in upon the *raptus humorum* which is draining the patient; by so doing, we shall moderate, but not arrest, menstruation. This *autocratie* of menstruation reminds us of a singular fact which occurred in the practice of our friend the late Dr. Kapeler. A girl was under his treatment for acute pneumonia; she was bled seven times, and immediately afterwards menstruation appeared.

HYSTERIC TYPE.

Cold water enemata are the most effectual means both of arresting the attacks and giving tone to the organs of reproduction, and while directing our attention to local remedial means, we must not omit to state that it is necessary to ascertain whether there be any mechanical impediment to the menstrual flow, by ulceration of the cervix uteri, or its permanent stricture—conditions which would require appropriate treatment; for under the strange symptoms of this type there often lurks some corporeal lesion which admits of cure. We have seen so often this to occur, that we cannot agree with Dr. Watson (*London Medical Gazette*, 1841,) that in 999 cases out of 1000 hysteria is unattended by peril, either to body or mind.

In the treatment of cases of this description, a sound moral management, based on a just appreciation of some of the causes of sub-acute ovaritis which we have so lengthily investigated, forms a very effectual part of the treatment, but in this respect our prescriptions are of little avail, and the patient is too often left at the mercy of capricious relatives, and of adverse circumstances.

It would be a grand object of praiseworthy ambition for every Christian mother to seek to develop the "mens sana in corpore sano"—the *mens sana*, by the active exercise of those powers

of mind which can alone keep in due subjection the flights of a vivid fancy, or the yearnings after unknown gratifications, which will still obtrude their seductions on the youthful imagination; and the *corpus sanum*, by giving increased action to the muscular system, through the different modes of exercise and gymnastics, thereby fully correcting the exaggerated preponderance of the nervous system, keeping in healthful play the different organs of the frame, and allowing to each an adequate amount of its appropriate stimulus.

Is marriage to be sanctioned when the ovaries are sub-acutely inflamed?

We say decidedly not. The disease, in the generality of cases, may be removed by proper treatment, and if it cannot be so removed, as in those cases occurring in delicate scrofulous girls, who from their infancy have suffered from peritonitis, or enlargement of the mesenteric glands, how cruel would it be to countenance a marriage which must be attended by fatal consequences; for undoubtedly marriage would aggravate the disease! Conception might be followed by abortion; or should a sickly child be brought to light, its birth would generally be followed by the increased illness of the mother, terminating by her sinking into speedy dissolution.

If, as Dr. Tyler Smith contends, there is an epilepsy which is dependent on ovarian irritation,

and which completely disappears during pregnancy, the question again arises whether the physician can sanction the marriage of epileptic women; but even if a sufficient number of cases were brought forward to show a probability of benefit to the mother, her offspring might be tainted, or the disease might show itself in her grandchildren, of which Mr. Streeter has cited an instance. In this age of enlightenment people must be allowed, no doubt, to do what they please with their own bodies, but it behoves the physician to consider the race as well as the individual, and not to give his sanction to anything that may taint the purity of either.

Is marriage to be countenanced when the ovaries are prone to be sub-acutely inflamed?

We answer in the affirmative. There is truth in what Pliny the elder says—"Multa morborum genera primo coitu solvuntur, primoque feminarum mense;" and we are persuaded that the want of the appropriate stimulus to the ovaries which should promote their healthy action, is often the cause of their becoming the seat of morbid affections. If, however, the ovaries should relapse into sub-acute inflammation, under the influence of the matrimonial stimulus, the disease must again be carefully checked by appropriate treatment. We believe that nature, true to all her healthful impulses, promises the continuance of a greater amount of health to those who take upon themselves the

burden of child-bearing, and the perils of delivery, and that marriage is, in many cases, a preservative against hysteria and those spurious ovarian and uterine growths, before which the medical attendant would afterwards stand in powerless dismay.

STERILITY.

Having nothing additional to state respecting the treatment of such cases of sub-acute ovaritis as are followed by sterility, we pass to the obstruction of the Fallopian tubes, as a cause of this infirmity. After mentioning, in a paper read before the Westminster Medical Society, that sometimes these tubes are obstructed by mucus, we asked the question—"Does this condition give any therapeutical indication? Dr. Mackintosh and Dr. Simpson have shown that we may, in some instances, effectually relieve patients suffering from a similar obstruction of the neck of the womb, by probing and dilating its canal. Will men of eminence likewise attempt to probe, dilate, and inject, the Fallopian tubes? We hope not, for peritonitis is not a disease to be trifled with. When we consider that we can only *guess* at this possible cause of sterility, and have no positive evidence of its existence; when we remember that in the dissecting-room, it is often difficult to pass a probe from the uterus into the Fallopian tube,—the difficulty of the operation seems tantamount to an

impossibility. This impossibility cannot be regretted; for the advantage attending the operation could only be attained at the risk of imminent danger to the patient's life."

At the following meeting of the Society, Dr. Tyler Smith explained that he had peformed this operation, and he exhibited an instrument which he had invented for deobstructing the Fallopian tubes in such cases. The instrument, in the use of which the speculum is always required, consists of a small silver catheter, bent like the male catheter, or the uterine sound, to adapt it to the curve formed by the uterus and vagina, and having a lateral curve at the distal extremity, pointing, when *in situ*, to the uterine mouth of the Fallopian canal. Through this catheter, a fine, flexible, whalebone bougie is passed into the Fallopian tube. When the small bougie is thus passed, so as to project at its Fallopian extremity, the instrument represents accurately the singular direction taken by the generative canal, from the mouth of the vagina to the fimbriated extremity of the tube.

This novel operation proposed to bring an important organ under treatment, which had hitherto been removed from all interference, but this proposal has been very differently received by the profession. Sir B. Brodie is struck by the difficulty of distinguishing in what cases it is required; he thinks it ought to be confided to gentle and cautious

hands, but he does not doubt the practicability of performing the operation ; he has, however, omitted to inform us whether he has performed it himself. Dr. Oldham, on the contrary, gives the operation an unqualified reprobation. He says,—"Indeed, the operation appears to me indefeasible, and, but for the authority of so good a name, it could hardly be rescued from the charge of extravagance." If, after the opinions of such men, ours could have any value, we would willingly admit the innocuity of the operation in the able hands of its distinguished originator ; but in a general point of view we should repeat our first remarks. We still doubt the possibility of its performance on the living body, and we would wish to see it put in practice, and thus confirmed by the operation being performed on the dead subject, and the probe being then found in the oviduct on the opening of the body. But, admitting the possibility of the operation, if the tube contains but its ordinary secretion the process is useless—if the mucus be thick, then the bougie will no more remove it than it removes the glutinous plug which so often obstructs the neck of the womb ; besides, it could not modify the inflammatory condition of the lining membrane of the tubes, which causes them to secretethe glutinous substance, and thereby produces their temporary occlusion ; whereas, if it were at-

tempted to cauterize the oviducts, or inject them with different liquids, we consider the danger of the practice would far exceed the inconvenience of the infirmity it is intended to alleviate.

In our preceding page, we have given ample proof of the necessity of great caution in the treatment of uterine disease. We do not consider that we have detained the reader too long on the subject of sterility, because it sometimes admits of cure,—and nothing tends so much to the honour of the profession as the ability, not only to preserve the life of individuals, but also to place them in a position to perpetuate their families. Great was the gratitude of Henry II. of France to the celebrated Fernelius, for enabling him to raise issue from Catherine de Medicis, after ten years of a fruitless marriage; and, though we cannot all be court-physicians, we may still experience similar gratitude from those who are equally desirous of leaving to posterity their less illustrious names.

We here conclude our observations on the treatment of sub-acute ovaritis and its terminations; and, before considering the acute form, we will pause a moment to impress once more upon the mind of the reader the necessity of paying more minute attention to the detection of the obscure symptoms of ovarian inflammation, whenever called upon to prescribe for dysmenorrhœa, sterility, or hysteria, so that the evil may be attacked in the bud, its

increment forbidden, and the disease not allowed to attain to such a degree of magnitude as may compromise the patient's life, either by its presence or by the operation for its eradication. "Principiis obsta, sero medicina paratur."

CHAPTER VI.

ACUTE OVARITIS.

Syn.—Inflammation of the uterine appendages; abscess of the broad ligaments; pelvic tumours.—Oophoritis. (Dugès.)

Def.—Considerable swelling of the ovaria, and the surrounding cellular tissue, with formation of pus; its elimination or absorption.

PATHOLOGICAL ANATOMY.

When describing the anatomical lesions of acute ovaritis we tread on less disreputable ground than when speaking of those of the sub-acute form. These lesions are in themselves more apparent, and similar to those produced by inflammation in other organs. If the inflammatory process has been sufficiently intense, or has not been actively treated, the ovaria in the course of a few days swell to a considerable bulk; and if by chance an opportunity is afforded of examining them, they

are found to contain pus, either infiltrated in the tissue of the organ, or disseminated in its various parts. These purulent deposits scattered through the ovaries have been described by Negrier, and considered as inflamed Graaffian cells, filled with pus of their own secreting. He has given an interesting case, where the rupture of one of these very small purulent cavities, and the diffusion of its contents into the peritonæal cavity, terminated in death. These small cavities may communicate, or the central part of the ovary may be broken, nothing being left but the ovarian shell, filled with pus. Haller, Portal, Montaut, and Cruveilhier, have related cases wherein the ovarian abscess contained several pints of pus; and in the *North American Journal*, 1826, Mr. Taylor has published a case where an ovarian abscess was said to have contained twenty pints of pus.

We think, however, that reports of such cases must be received with caution, and that many of them are ovarian cysts, the internal membrane of which has become inflamed, and has secreted a puriform fluid.

These collections of pus, if not artificially opened, have a tendency to empty themselves into the neighbouring organs, when they will be found to communicate, by fistulous passages, with various parts of the intestinal canal, with the bladder, or with the vagina, or to open into the peritonæal cavity. T. Bonnet, Shenkins, Merat, and Dr. Seymour

have related cases wherein the ovaries were found to be in a state of gangrene. We must remark that, in these acute cases of inflammation, the adjacent cellular tissue is also inflamed, and that this adds considerably to the size of the tumour, and to the extent of its suppuration—indeed, some authors think that pelvic tumours originate principally in the pelvic cellular tissue. The ovarian peritonæum is also implicated in the general inflammation. It is covered with false membranes, causing it to adhere to the neighbouring organs, and these adhesions (if the patient survive) are transformed into those solid bands which interfere with the play of the pelvic viscera, and frequently cause abortion.

The coincidence of abscess in the ovary and the correspondieg oviduct were noticed by Morgagni, and afterwards by Andral, Dalmas, and Haaze. In a post mortem examination, Cruveilhier found both the ovary and the corresponding Fallopian tube distended with pus, the tube being adherent, and the ovary so softened in the vicinity of the adhesion, that it would soon have allowed its contents to pass through the tube to the uterus.

The pathological lesions of puerperal ovaritis are sometimes seen to differ from those just described. Pus may be found in the ovarian veins, though not so frequently as in the uterine. Cruveilhier considers the lymphatics to be more commonly distended with the pus they have absorbed; and in

several of the plates of his *Pathological Anatomy*, he has shown the deep and superficial lymphatics of the ovaries and broad ligaments replete with purulent fluid. These vessels have been sometimes mistaken for veins; but when the pus is removed from the lymphatics, those structures appear perfectly healthy; whereas, when veins are inflamed, their tissues are thickened, have become more fragile, and are lined with false membranes. The size of the tumour is often more considerable, and the stroma loses all traces of organization, being more or less changed into a milky sero-purulent magna, or into a greyish sanious matter, or a vascular pulp, which is almost diffluent, and approaches very nearly to the condition of gangrenous decomposition, since it indicates the total disorganization of the ovarian tissue. In some cases of puerperal metro-peritonitis, Cruveilhier, Boivin, Dugès, Seymour, and Dr. R. Lee, have found (post-mortem examination) the diffluent ovaries ruptured, without it being possible to ascribe the rupture to any violent traction; and the shreds of the organ being mingled with pus and peritonæal effusion, have, no doubt, been described as the result of gangrene by the older authors. In these cases, was not the ovarian rupture the cause of the fatal peritonitis?— Another important pathological distinction between puerperal and idiopathic ovaritis is, that in the latter the adjacent peritonæum is frequently not

inflamed, and may for years form an efficacious boundary to ovarian disorders; but in the puerperal variety, as might have been presupposed, the ovarian peritonæum soon participates in, and often even originates, the disease—a disease which is the natural sequence of the high susceptibility to morbid action brought on by parturition, and of the increased flow to the pelvic organs of blood containing a greater proportion of fibrine than usual.

CHAPTER VII.

CAUSES, SYMPTOMS, AND DIAGNOSIS OF ACUTE OVARITIS.

CAUSES.

The causes of the idiopathic and puerperal varieties have been so carefully investigated when treating of sub-acute ovaritis, that we need not again dwell on them in this place, and will therefore refer the reader to the chapter, where they have been fully treated of, contenting ourselves with observing, that acute ovaritis is produced by the greater intensity or continuity of action of the causes of the sub-acute form, or, on the other hand, by the greater liability of the subject to be influenced by such causes.

SYMPTOMS.

Local Symptoms.—Pain is one of the first indications of acute ovaritis. This is increased by all movements of the body, and most of all, by extension

of the limb of the side affected. It varies in intensity, being sometimes bearable, at other times most acute. Dr. Ashwell mentions a case where it was so overwhelming, that syncope was induced by the patient's rising in bed to relieve the bladder. The nature of the pain varies, being either heavy and dragging, pulsating or accompanied by a feeling as if a foreign body were boring its way through the vulva. When alarmed by the pain, if we examine the ovarian region, which is its seat, we can often see a tumour distinctly pointing from the side of the pelvis; but we cannot, from the absence of this, infer the non-existence of ovarian inflammation, for the enlarged ovary, if free from adherences, often dips down into the recto-vaginal *cul-de-sac*. The absence of a tumour in the ovarian region, coinciding with other signs of ovarian disease, rather confirms the presumption of the tumour being ovarian, or, at least, it excludes the possibility of the symptoms being caused by iliac abscess. If we apply the hand, we detect an increase in the natural heat of the body; and of this heat the patient herself is frequently aware. Pressure increases the pain, and the extent of the tumour is more or less distinctly felt. There may be also a sense of uneasiness or numbness in the limb corresponding to the seat of the tumour.

By a vaginal exploration, this passage will be

found hotter than usual, dry, and not lubricated by mucus. The upper curve will sometimes be infiltrated, giving to the finger the sensation imparted by brawn. We may here observe, that ovarian pelvic tumours and incipient ovarian cysts interfere with the same organs, and produce the same local symptoms. The physical means of examination which apply to pelvic tumours also relate to the detection of ovarian dropsy in its early stage.

When the tumour is small, it generally subsides between the uterus and the rectum, or between the former organ and the bladder, and, in some rare cases, not only presses on these organs, but actually forces down the fundus uteri, causing prolapsus of this viscus. In a case recorded by Mr. Jackson, the tumour was situated behind the rectum, which was consequently pushed forwards. If the tumour develop itself behind the uterus, it may press it against and above the pubis, thus producing, by its continued pressure, abnormal deviations and atrophy of the womb. When the tumour has increased, and is no longer entirely in the vicinity of the vagina, having ascended towards the brim of the pelvis, valuable information respecting its position and nature may still be afforded by the finger, even though it cannot reach the seat of disease. Thus, the tumour may depress the uterus to the right or to the left, or may flatten it against

the pubis, causing its complete retroversion, and also rendering it impossible for the finger to attain the os uteri. Mr. Robert, of Paris, has met with several cases of this description. This cannot take place without elongating the vagina and urethra, altering their form and direction, and interfering with their functions; copulation may be impossible, the egress of the menstrual flux difficult, and, in a case related by Dugès, the pressure of a large tumour was such as to cause the total obliteration of the vagina. For similar reasons, micturition may be greatly impeded, and there are patients who can only pass water on reclining their body as much backward as possible. In some cases (Boivin, Laugier) it was necessary to depress the tumour, in order to pass the catheter; in others a male catheter only can be made to penetrate into the bladder; and there are also cases where it is impossible to introduce this instrument at all. Sometimes we can only just feel the inferior segment of the uterus, and then we find that its usual mobility has been checked, or that it is bound down by the thickening and infiltration of the adjacent inflamed tissues, and thus rendered immovable in the pelvis.

If the tumour has been allowed to increase, and if it has contracted adhesions with the uterus, it will, on rising above the brim of the pelvis, draw the uterus after it. In such cases, which are not

of frequent occurrence, the impossibility of feeling the neck of the womb is easily explained. By a rectal examination we confirm the conclusions of the previous inquiry; and as we have practically shown, in our chapter on the various modes of exploration, the double-touch affords us the best means of establishing an accurate diagnosis of these often difficult cases. We can, by this means, guard against mistaking the uterus for a morbid tumour; when the tumours are small, we can seize them in their most frequent abode—the recto-vaginal space; and we can detect fluctuation, if their contents are liquid.

In the commencement of acute ovaritis, the dysuria is only sympathetic; but when the tumour has increased in size, should it fall between the bladder and the uterus, it may, as in the incipient stage of ovarian cysts, give rise to a most painful symptom—viz., the desire of passing water every minute. If the ovarian tumour becomes still larger, and occupies the pelvic cavity, the bladder will be diminished in size, and its fundus is generally pushed forward and above the pubes, when the catheter, as we have already observed, will not pass freely through the elongated urethra. After this explanation, it will not be difficult to understand, that the sudden suppression of the jet of urine when the patient bends forward, and its free flow when she throws herself backward, are indica-

tive of the existence of a pelvic tumour. The urine itself should also be carefully examined, for if it contain pus, this would throw some light upon the case.

In the early stages of idiopathic ovaritis, nausea, sickness, and sometimes constipation, are frequent accompaniments, depending, at first, on the irritation of the visceral peritonæum, and the temporary paralysis of the muscular coat of the intestines. When, however, the tumour has increased, and rests on the rectum, the patient is troubled by a more constant constipation, and by tenesmus. The pressure on the rectum is sometimes so great, that the fæces are moulded into the form of a riband. If the tumour increases still more, it rises above the brim of the pelvis, and then the lower intestine is no longer compressed to the same degree. It is incumbent on the medical attendant to examine the fæces, as, by the appearance they may present, and the pus they may contain, important elements of diagnosis may be obtained. So imperfect has been our acquaintance with the nature and symptoms of this disease, that many writers have asserted that it is accompanied by nymphomania. Two of our most esteemed authors entertain this view; thus, Dr. Copland, (*Dictionary of Practical Medicine,*) speaking of the acute form of idiopathic ovaritis, says, "the mind is more evidently affected in the sanguine, the irritable, and the plethoric; thedesires are inordinately excited, so as almost to

amount to uteromania;" and Colombat (*Traité des Maladies de Femmes*) enumerates inflammation of the ovaria among the causes of nymphomania. But as there are no modern cases on record wherein the ovarian abscess was attended by such symptoms,—as rather, on the contrary, these symptoms were absent in all cases of acute ovaritis lately observed, and as the cases recorded by the older writers are but loosely given, we are inclined to believe that if, after the symptoms of furor uterinus had been observed, pus was found in the ovaries at the post-mortem examination, these terrible symptoms did not proceed from ovaritis, but from some concomitant irritation of the external organs of generation, of the cerebellum, or of whatever part of the brain is in peculiar correspondence with the organs of reproduction, and, by reflex nervous action, impels us to sexual gratification. The general symptoms of acute ovaritis are, in the first stage of the complaint, similar to those which announce the process of suppuration in any deep-seated organ, such as shiverings, followed by fever of a remittent or continued type, particularly when the symptoms of ovaritis merge into the more marked phenomena of acute peritonitis. In the worst cases, abundant perspirations, violent thirst, disordered stomach, delirium, coma, and complete insensibility to all pain, close the scene. Frequently, however, the patient amends, and the

ovarian swelling diminishes; but, on account of the periodical turgescence of the ovaries, relapses occur; or else the inflammatory type lowers, and chronic ovaritis, or what we have called subacute ovaritis, is established. When this disease, under the popular appellation of "inflammation of the bowels," has not been carefully diagnosed, or has not been judiciously treated, it may last for years, giving rise to one or other of those menstrual derangements which we have seen so often to originate in subacute ovaritis, or to leucorrhœa, consequent on the permanent congestion of the whole generative system.

Tubal inflammation is not to be distinguished by any peculiar symptoms from acute ovaritis. We cannot better exemplify it than by a case recorded by Mr. Harrison, (*American Jour. of Med. Sciences*, vol. xv. p. 372.)

Case 14.—*Inflammation of the Fallopian tubes and ovaria, terminating in purulent deposit, with a fatal catrastrophe.* I was requested to meet Dr. Talbot, of this city, in the case of Mrs. T., wife of a respectable merchant, who had been quite ill for two or three weeks. This was on the 18th May, 1834. I found her with fever, hot skin, and a quick small pulse, —tongue with a slight fur upon it,—bowels easily acted on by medicine,—stomach affected with incessant nausea, and incapability of retaining either

medicinal or dietetic articles. There was a tumour in the left iliac fossa, just below the anterior-superior spinous process of the ilium; it was not very painful on the application of the fingers to it; there was great pain in the sacrum and down the left thigh. Severe pain was produced by the introduction of the pipe of the syringe into the rectum, and there was much difficulty in administering an enema successfully, from some obstruction in the gut, either from a diseased condition of its coats, or from some adventitious body pressing on and diminishing its calibre. Upon examination per vaginam, I found the os tincæ tumid and irritable, the lady complaining greatly on pressure of the finger on the part. She was of a delicate frame of body, but had always enjoyed excellent health until within two months. She had been married six months, and had menstruated regularly up to this period; but, during the last two catamenial efforts, she experienced considerable pain, and shortly subsequent to the last monthly period the tumour made its appearance. She passed through two menstrual periods without any additional pain; the fluid discharged at each time was healthy in its aspect, except not so highly coloured, and it was diminished in quantity. In a few days after my last visit she died. Permission was given to open the body. Upon opening the abdomen, the stomach was found entirely

natural in its appearance, the mesenteric glands were enlarged, and the lungs contained some miliary and aggregated tubercles, but not in a state of suppuration. The important lesions were found in the uterine economy: both Fallopian tubes were enlarged, especially the left one, which was much distended, and prominently pushed upwards, the fimbriated extremity being adherent to the left ovarium. The ovaria were enlarged, and a copious deposition of coagulable lymph had formed a mass of morbid substance between the ovaria, which matted them together, and which was firmly united to the rectum, and pressed upon that gut. There was about an ounce of laudable pus in the left Fallopian tube, and about three drachms in the right tube. The tubes were impervious to a small probe from the uterus. The os tincæ was tumefied and red, and there was a slight lining of pus on the internal surface of the uterus. The rectum and bladder were both implicated in part in the morbid action of the uterine apparatus, their coats being thickened or hypertrophied. This is another instance of the persistence of a menstrual *show*, when all communication was effectually stopped between the ovaries and the womb.

The symptoms of the puerperal form do not materially differ from those already described. Sometimes the disease is announced by the diminution or the total suppression of the lochial

discharge, by pain, and by the general symptoms described ; but, at other times, the lochial discharge, as well as the flow of milk, continues for several days after the first appearance of fever ; and, as the pain is less intense, the disease, which may have originated immediately after labour, is only recognised several days afterwards. But although the pain be less, there is a greater amount of swelling and of peritoneal inflammation, which soon becomes general if it originate in the serous covering of the ovaria, and is attended by all the symptoms of puerperal fever, by which the local disease is so effectually masked.

BLENNORRHAGIC OVARITIS.

This is very rare, and it may be the result of the extension of inflammation by the Fallopian tubes, or of the immediate application to the ovaries of the blennorrhagic pus, which has been conveyed by the same capillary attraction by which the seminal fluid is conducted. It does not occur in the acute period of the blennorrhagia, but, on the contrary, when it is on the wane. It may occur alone, or it may co-exist with metritis, which is frequently the case. The peritonæum, however, is seldom attacked. When the patient is mending, the pain first diminishes ; next, the swelling ; and the discharge becomes more considerable, but does not reappear, if its suppression coincided with the ap-

pearance of ovaritis. As this variety of disease is not generally admitted in this country, we subjoin two cases, one published by Dr. Vidal de Cassis, who mentions having seen several similar cases at the Hôpital de Lourcine (the Paris Lock Hospital).

Case 15.—A woman had been suffering for some time from intense blennorrhagic inflammation of the vagina, when the uterus became inflamed, and afterwards there appeared undoubted symptoms of ovaritis. There was acute pain in both ovarian regions, though this was not much increased by pressure; and by a careful exploration it was easy to discover a swelling. The thighs were painful, and subject to cramp. There were also sickness, headache and fever. Ten days after the first appearance of ovaritis, when the pain had abated, the speculum was used: a great quantity of fetid pus was observed to come from the os uteri, and it became obvious that this pus passed from the ovaries, through the Fallopian tubes, into the uterus, which, on the application of the speculum, contracted, to eject its contents.—*Traité de Pathologie Externe.*

Case 16.—A girl, aged nineteen, was received into the Hôpital de la Charité, April 1, 1838. She presented all the appearances of typhoid fever, and complained of very acute pains in the lower part of

the abdomen, which were considered to indicate intestinal ulceration; but a few days after she owned that she had been leading a very gay life, and that she was then suffering from an acute blennorrhagic affection. The typhoid symptoms grew worse, and the patient died. Those intestinal ulcerations which almost always accompany fever in Paris were found; the genital organs were more or less inflamed,—so was also the membrane lining the Fallopian tubes, and these contained a certain quantity of purulent matter. Their uterine extremities were not obliterated. The peritonæal surface was perfectly healthy, except in the vesico-uterine cul-de-sac, where soft, pulpy, and thin false membranes covered the womb and part of the bladder; similar productions were found in the recto-uterine space, extending all over the broad ligaments, the ovaries, and the extremities of the Fallopian tubes, one of which was completely obliterated, while the other, although surrounded by numerous false membranes, still communicated with the peritonæum.

In this interesting case, which was taken by Dr. Mercier, the morbid phenomena were admirably exemplified by the post-mortem appearances; inflammation was gradually transmitted from the vagina to the peritonæum, obliterating the free extremities of the oviducts, and binding them down to the adjoining organs.

The like phenomena no doubt take place in prostitutes, and produce sterility. They had the same effect in a woman who was treated for a gonorrhœal complaint by Mr. Whetherfield, of Henrietta Street, Covent Garden, and in whom the disease was accompanied by violent pains in both ovarian regions, and a marked swelling in one. The woman recovered; but although she had previously borne children, and was young, she never again became pregnant.

RHEUMATIC OVARITIS.

Although Kruger, Merat, Dr. Fleetwood Churchill, and Dr. Copland, have given cases of this disease, it is one of most rare occurrence; and we will make but few observations on the subject, before relating a short and most interesting case to illustrate this variety of disease. It is said to occur, like rheumatism of the uterus, during the last months of gestation, during labour, and in the puerperal state, and to be caused by the action of cold air on the excessively expanded, and often unprotected, parietes of the abdomen. In addition to the usual symptoms of the disease, there are sometimes violent paroxysms of pain, and intense perspirations.

CASE 17.—*Rheumatic Ovaritis.* Mrs. P——, of

Walworth, was attacked, July 15, 1821, with most excruciating rheumatic pains in the loins and limbs, increased on the slightest motion, or in attempts to turn in bed. She was in a profuse perspiration, and her pulse was full, strong, and about 100. She attributed the attack to sleeping in a damp bed when travelling. She was about twenty-six years of age, strong, plethoric, and of the sanguine temperament. The catamenia were usually very abundant, and seldom at longer intervals than fourteen days; their occurrence was therefore soon expected. She had never been pregnant. About three days after the commencement of the rheumatic attack, and whilst I was attending her, she suddenly experienced an attack of most acute pain in the hypogastrium, a little above each groin. Soon afterwards, two tumours could be distinctly felt in the regions of the ovaria. They were extremely painful, and tender upon pressure. The pains in the limbs were greatly abated, but pain was still complained of in the loins. All the inflammatory symptoms continued; the bowels were costive; the urine was scanty and high-coloured, with frequent calls to micturition. The countenance was flushed, animated, and excited; the temper variable and hysterical. The treatment consisted of one bleeding from the arm, of repeated doses of calomel, ipecacuanha and opium combined, saline aperients being interposed,

so as to keep the bowels freely open; of the application of a considerable number of leeches below each groin, and of the warm hip-bath. Four or five days after this attack commenced, the catamenia came on, and the pain, tenderness, and swelling gradually disappeared from the hypogastrium. This lady, the wife of an old aquaintance was some years afterwards the subject of abscess between the vagina and rectum, which opened into the latter. She subsequently was attacked by gout and ultimately became consumptive, from an excessive addiction to brandy, but was carried off by delirium tremens, before the pulmonary disease had reached its utmost limits.—*Copland's Dictionary of Practical Medicine*, vol. ii. note to p. 926.

DIAGNOSIS.

The disease with which ovaritis is most frequently confounded is metritis, and naturally so, as both the diseased organs subserve the same function, are hidden in the same cavity, and the disease of the one often brings on the disease of the other—a secondary result, which, according to the erroneous views of pathologists is often viewed as the primary affection. We have, however, sufficiently proved, that to believe with some writers that all diseases of women are produced by uterine affections, and that the ovaria can, at most, be only affected with a neu-

ralgic pain, is alike opposed to physiological and pathological data, and also to facts revealed by post-mortem examinations. Portal has observed, that we often meet with patients whose symptoms have been attributed to inflammation of the uterus, but who, after a lapse of time, and subsequently to their apparent recovery, become the subjects of fulness and great intumescence in one or in both of the iliac regions; and that on inspecting the bodies of such persons, the uterus is found healthy, while the ovaries and ligaments are diseased. Metritis is generally attended by a greater amount of fever than ovaritis; there is more sickness, and the tumour can generally be detected above the pubis. The pain is more constant, lancinating, and unaccompanied by those far-spreading radiations which are so frequent in ovaritis; still, the difficulty can only be solved by a minute investigation.

Ovaritis and tumours in the broad ligaments may, however, be confounded with the morbid permanence of puerperal hypertrophy of the womb, which is far from being uncommon, and, when not confined to a central position, may easily give rise to mistakes. In cæco-ilias abscess, the tumour gives to the hand the feeling of crepitation. In the first stage of this disease, as well as in psoas abscess, the patient experiences great pain on walking, and, when obliged to keep in bed, the limb is most obstinately flexed on the pelvis; whereas, in

ovaritis, though it may be found drawn up, stil it can be extended without much increasing the patient's suffering. Ovaritis will be readily distinguished from fæculent collections in the cæcum and the sigmoid flexure of the colon, for then there exist gastro-intestinal symptoms, such as a loaded tongue, flatus, colics, and vomiting. Dr. Lever says that pelvic tumours may be confounded with simple abscesses of the abdominal walls, which, he further adds, "I have seen occur, without any assignable cause, two or three times, from the giving way of some muscular fibres, or tendinous expansion during labour, —then there is instantaneous violent pain, and in all cases the abdominal wall cannot be moved over the tumour, as in pelvic inflammatory tumours."

We must also bear in mind that, in the course of ovaritis, there may supervene inflammation of the fossa iliaca, although it is not so frequent as Velpeau supposes. Dr. Lever has several times seen pelvic inflammation produce phlegmasia dolens, and Dr. Melier has sometimes seen phlebitis, and consecutive infiltration of the limb, as consequences of puerperal ovaritis.

CHAPTER VIII.

TERMINATIONS OF ACUTE OVARITIS.

It is well to know the organic seat of a disease and to be able to appreciate the signs by which it can be distinguished from the diseases of other organs; and it is equally desirable to know what are the possible consequences it entails, and what are the degrees of probability attending each of them. As in all other organs of the human frame, when inflammation has arrived at suppuration, the pus deposited in the ovaries may be absorbed into, or ejected from, the system.

RESOLUTION.

Contrary to the opinion of Boyer, and many others, whose memory was particularly impressed with some of the most fatal cases of ovaritis, we may admit that resolution is not an uncommon result of acute inflammation of the ovaries. It often occurs as a result of active treatment, when pus is diffused, and infiltrates the tissue of the organ. It has even been known to happen when a considerable quantity of pus has collected in one cavity. Martin Solon

(*Dict. de Médicine*) has related a case, wherein fluctuation in the ovarian tumour was so evident, that he had fixed the day for opening it. But, on examining the tumour previous to the operation, he thought it was less than when he had previously explored it; he therefore put off the operation, and it was well he did so, for Nature took upon herself to disperse the tumour, by absorbing its contents, and by throwing the burden of the morbid collection on all the organs of the patient's frame.

ELIMINATION.

But when the purulent collection is so considerable that its absorption would be detrimental to the human body, or when the vital powers are inadequate to this task, the purulent matter then works its way out, and thus accomplishes that providential law of the animal frame, by which a centrifugal impulse is given to all that is noxious in the system.

In enumerating the divers outlets contrived for the evacuation of pelvic tumours, we shall distinguish those which open externally, whether directly or indirectly, on to the skin, or into the vaginal, intestinal, or vesical outlets, and those which open internally, as into the peritoneal cavity. When puerperal ovaritis has been allowed to attain considerable development, the chances are that it will end in suppuration. Thus, out of sixty cases of pelvic tumours, collected by Mr. Taylor,

(*Lond. Med. Gaz.*, May 26, 1848,) fifty-three terminated by suppuration, and only seven by resolution; but we repeat, that only extreme cases of this disease are recorded, and that many of these were not cases of ovaritis.

Reasoning upon fifty cases, forty-nine of which were puerperal, Marchal de Calvi maintains that pelvic abscesses open with equal frequency upon the different surfaces we have just enumerated; but this shows the fallacy of statistical results, when deduced from a small number of cases; for the assertion is contrary to the experience of most writers, as well as to our own. We may, however, accept as a demonstration of the danger of *acute* puerperal ovaritis, the fact that, out of the fifty cases he has collected, thirteen were fatal—though this can by no means serve as a guide in our estimation of the ratio of mortality in the idiopathic variety.

CUTANEOUS OPENING.

When purulent tumours have been allowed to open on the surface of the skin, they, generally speaking, have attained so large a size, that the prognosis is unfavourable. The opening usually takes place in one of the iliac regions. Montault describes a case wherein the pus, being conducted by the round ligament, passed through the inguinal canal. Sometimes, however, it may follow the

course of the femoral vessels, forming tumours which have been taken for aneurisms, in the vicinity of the crural arch. Dupuytren has seen several cases of this description.

VAGINAL OPENING.

This is the most frequent and most felicitous termination of ovarian abscesses, which may void their contents by the vagina, either through the medium of the Fallopian tubes and the uterus, or by direct communication with the vagina. Instances of the first description are not often met with, but the following is mentioned in the *Mémoires de l' Académie des Sciences*, 1700 :—

Case 18.—A nun, who had never menstruated, committed suicide, and, on a post-mortem examination, pus, with hair embedded in a fatty substance, was found in one of the ovaries ; the corresponding Fallopian tube, communicating with the ovarian cavity, was full of pus, and emptied itself into the uterus and the vagina. Cruveilhier, on dissecting a body, found the contents of a purulent cyst on the eve of passing through the oviducts into the uterus. On detaching the fimbriated extremity from the ovary, pus issued from the Fallopian tube which had contained it, and on pressing the tube in the direction of the uterus, the matter also flowed from the uterine orifice of the oviduct. Madame Boivin has seen an undoubted case of pus passing from the ovary by the Fallopian tube

into the cavity of the uterus; there was no other means of explaining the sudden and abundant discharge (two glassfuls) of viscid greenish pus, which flowed unmixed from the os uteri, to the great relief of the patient. Chaubon described such cases in his treatise on "Diseases of Women;" and we have, moreover, already given an interesting case, wherein a distinguished Paris surgeon, Vidal de Cassis, believed a similar communication to have taken place.

Dr. M'Intyre informs us that, within the last few months, he has had under his care a lady of thirty-five years of age, in whom, without any appreciable cause, acute ovaritis manifested itself: the abscess burst, and, for several days, a considerable quantity of green fetid pus was voided by the vagina; the patient then recovered.

These cases must, however, be considered exceptional, for the pus is generally voided by a direct communication between the abscess and the vagina. This termination has been frequently met with by both English and Continental practitioners, and (as we shall see hereafter,) it has pointed out the best mode of treatment to which in similar cases, we can possibly resort. Sometimes the ovarian abscess will communicate with various surfaces of the human body. Instances of this will be seen in some of the cases we shall relate by-and-by; but one of the most interesting is mentioned in his thesis by Dugast, and was met with

by him when dissecting the body of a woman who died of consumption. He found the left ovary, about the size of a hen's egg, adhering by one of its extremities to the sigmoid flexure of the colon, and by the other to the uterus. The intestine communicated with a tuberculous abscess of the ovary; and where the ovarian tumour was attached to the uterus, the tissue of the latter was softened to such an extent, that a similar communication between the ovarian abscess and the uterus would have shortly taken place; so that, if the patient had lived a little longer, the fæces would inevitably have passed into the ovarian abscess, and thence into the uterus, and would thus probably have been voided by the vagina.

INTESTINAL OPENING.

Much less frequently is the pus voided by the intestines; and though it has been affirmed by M. Velpeau and others, that this termination is as favourable as that wherein the pus is voided by the vagina, we must beg leave to differ from that opinion,—First, because it is not borne out by facts; secondly, because it stands to reason that the prolonged passage of pus on the vagina—a surface destined for the excretion of fluids—must be less prejudicial to the system than the lengthened contact of this fluid with the internal surface of the intestine, the entire mucous coat of

which is more or less devoted to the absorption of those matters which are to nourish and renew our organs. In these cases, though the cure of the ovarian abscess may progress favourably, still the patient may sink from the debilitating influence of colloquative diarrhœa. It follows as a consequence of what we have stated, that the higher the opening into the intestinal cavity is situated, the greater will be the danger; and that there is a better chance of cure in cases of a rectal communication (Andral, Nauche, Boivin, Montault, Imbert, and Velpeau,) than in those where the abscess communicates with the cæcum or with the colon, (Montault.) We must also bear in mind, that in communications of this description (between ovarian cysts and the intestines,) the opening of the abscess into the intestine has sometimes a valvular disposition, so that, although the pus can enter the intestines, the contents of the intestine cannot obtain ingress to the cyst.

We append a case, which has been lately published in one of our medical journals by Mr. Bartrum, of Bath:—

Case 19.—Four months before the death of a patient, thirty-two years old, her belly swelled, and from that circumstance, as well as from severe pain occasionally felt in the bowels, she imagined herself pregnant. A month before her death, she felt a

sensation as if something had burst externally, which she likened to the explosion of a pistol. This was followed by vomiting, constipation, and death; and on opening the body, an abscess was found in the left ovary, and an opening, by which it communicated with the rectum, was situated twelve inches up this intestine.

VESICAL OPENING.

Communications of ovarian abscesses with the bladder are not of frequent occurrence, but have nevertheless been observed by Dupuytren, Husson, Dance, and others, in cases wherein the patient voids the contents of the cyst through the urethra.

PERITONEAL OPENING—PERITONITIS.

We now come to a termination of ovaritis which has not yet been considered in the entirety of its relations; but as we are not writing a complete treatise on ovariology, we shall merely sketch the peculiarities of peritonitis in connexion with acute ovaritis.

The peritonæum is, generally speaking, an effectual boundary to the inflammatory process established in the subjacent organs; still it often happens, particularly in the puerperal state, that inflammation passes from the ovaries to the serous membrane which covers them. Peritonitis may, then, be local or general.

Local peritonitis is announced by the usual symptoms of the disease; but the pseudo-membranous deposits by which it is followed (though often of slight importance in other parts of the abdomen) seriously interfere with the functions of generation, when they extend over the ovaria, the oviducts, and the uterus.

These false membranes frequently cause sterility; for the ovary is either so coated by them, that the elimination of the ovules cannot take place; or else the Fallopian tubes, which so often participate in the inflammation, are bound down by them; and thus their infundibula cannot obey their peculiar instinct to advance and embrace that particular portion of the ovary, whence the ovule is to escape.

It is self-evident that although the Fallopian tubes be bound down, the ovaries, if healthy, still proceed with their special function, ovulation. Therefore, every month an ovum is detached from its ovarian cell, from its *matrix superior*, as Fabricius de Aquapendente justly calls it, and, accompanied by a certain amount of sero-sanguinolent fluid, which is the lochia of the ovarian nidus, it falls into the peritoneal cavity. Whether this menstrual effusion be sufficient to produce local peritonitis we are not prepared to affirm; but we consider it to be a cause of dysmenorrhœa.

The transmission of inflammation and its products by the oviducts is an undoubted cause of

local peritonitis which has not attracted sufficient attention, but has, however, been placed beyond doubt by several cases related in this work, and particularly the one related by Dr. Mercier (page 200).

The extreme frequency with which pus is found in the oviducts of those who die of puerperal peritonitis has been noticed by Cruveilhier, and other anatomo-pathologists. This pus is sometimes developed in the tube itself, but we think it is often pumped up from the uterine cavity by the same capillary attraction which raises the seminal fluid to the ovaries, and that its effusion into the peritonæal cavity is sometimes the cause of puerperal peritonitis.

Dr. Martin Duncan, of Colchester, thinks that the ovaries sometimes relieve themselves from congestion, by pouring out a morbid amount of ascitic fluid; and we cannot better explain his views, than by giving his remarks on a case which he has recorded (*Prov. Med. and Surg. Jour.*, Oct. 1848):—

"I believe it is very rare for the operation of paracentesis abdominis to be anything more than a palliative measure. In this case, it was clearly the means by which the ascites was cured; but it is evident that the success was determined by the cause of the serous effusion. There were no symptoms of renal disease, and the previous history and the general appearance contradicted all ideas tending to the probability of there being any ob-

stacle to the passage of blood through the liver. There were no symptoms of general peritonitis, but pain over the situation of the left ovary existed, with deficiency of the menstrual flux previously to the appearance of any abdominal swelling. Such symptoms are common enough, are to be referred to congestion of the ovary, and are usually relieved by the discharge of the monthly flux, the congestion being hardly abnormal. In this case I take it, that instead of the congestion being relieved by the discharge from the mucous surface of the uterus, the peritonæal covering of the ovary took on an unusual function—serum transuded into the general peritoneæal cavity, and relieved the tension of the vessels in its immediate neighbourhood. At each monthly period, for some time, fresh effusion occurred, the general loss of tone of the system preventing its total re-absorption; by-and-by the effusion increased to such a degree, by successive depositions, that the chances of its absorption by the means usually employed by nature became much diminished; and powerful drastics, diuretics, and diaphoretics, although given for months, hardly prevented further accumulation. All now depended upon the diagnosis, for if the above view of the case happened to be correct, paracentesis might be recommended, and a good prospect of cure held out; but if the fluctuation depended upon the presence of fluid in a diseased ovary, although the operation might relieve, no benefit would perma-

nently accrue from it. The commencement of the disease with pain in one side, accompanied by more or less tremor, and the general state of the health, tended to the idea of the dropsy being a cause; but occasionally the drum-like sound of intestine could be heard by carefully percussing above the umbilicus; and when she had reclined on one side for some time, it became evident over the other. The idea of there being a collection of fluid within a cyst was then hardly tenable. The operation was decided upon, and performed with a successful result; and the general health being improved by good diet and country air, the peritonæal surface of the ovary no longer relieved the hyperæmic condition of the organ, the uterus took on its proper function, and speedy restoration to health supervened."

The views of Dr. Martin Duncan are confirmed by the following case :—

Case 20.—A patient, aged forty-six, was received at the *Hôpital St. Antoine*. Menstruation had been habitually regular; she was a mother at twenty-one years of age, and had enjoyed good health. While taking a warm bath, to promote the menstrual flow, it ceased, and did not return. The lower extremities and the abdomen swelled, fluctuation was evident, and equally so whatever position was given to the patient.

Dr. C. Bernard, in relating this case (*Gaz. des Hôp.*, 5th Jan. 1850), gives another, where suppression of menstruation brought on tuberculous peritonitis; and Gendrin (*Histoire des Inflammations*) relates another, wherein ovarian irritation evidently originated the fatal disease.

Case 21.—A young woman, aged twenty-four, was, on the suppression of menstruation, seized with nausea, vomiting, lumbar and ovarian pains, and cephalalgia. Twenty leeches were applied to the labia; irritating enemata were given, together with stimulating drinks and hot hip-baths, and the patient improved; but in the following month, instead of the physiological process of menstruation, the previous morbid symptoms returned with redoubled energy. Two hundred leeches were applied to the abdomen in the space of five days; and, after lingering for a month, the patient died. On examination, pus and false membranes were found in different parts of the abdomen; there were also perforations of the bladder and colon.

The other effects of local peritonitis on the functions of reproduction have been well studied. Should the inflammatory lesions of these organs not impede conception, and should false membranes have been organized between the uterus and the adjoining viscera, this organ will then be found more or less bound down, and rendered in

capable of expansion. As long as the womb is untenanted, this may not be of much importance; but should gestation occur, it will be attended by more than ordinary pain, and the ovum will be prematurely cast off. The same cause may give rise to a succession of abortions, which will also entail a more than usual amount of suffering. Madame Boivin has, in a special manner, called attention to this cause of abortion; and Dr. Lever has also given apt illustrations of its importance, in his valuable contributions to the *Guy's Hospital Reports*.

Though partial peritonitis is one of the most frequent terminations of ovaritis, general peritonitis is a disease which rarely supervenes. Its study, however, is particularly interesting, because it affords us the only clue to the understanding of the milder form which is of daily occurrence, and enables us to treat it judiciously. General peritonitis is the result of effusion of pus or of blood from the ovaries, and from the Fallopian tubes.

It would seem (*à priori*) that this should be a most frequent termination of ovaritis, as the purulent cavity is placed in the immediate vicinity of the peritonæum; but that it seldom does take place, except after a sudden effort, or as the consequence of ulceration, we may consider an additional proof of the operation of that conservative principle which protects our frame; for this circumstance is most dangerous, if it do not

always prove fatal. We know that under other circumstances pus may be effused into the peritonæum, may become circumscribed or isolated by false membranes, and be partially or altogether absorbed in course of time; but we do not remember an instance of the patient's recovery after the effusion of ovarian pus into the peritonæum. Our experience is not, however, in accordance with that of other practitioners, for whose opinions we notwithstanding entertain the highest esteem.

"We have," says Dr. Simpson, "known it (the bursting of the abscess) to take place when the disease was chronic, and the purulent collection very small. The erysipelatous form (as it has been called) of peritonitis has, within our own knowledge, been traced, in repeated instances, to the irritation produced by the bursting of such small ovarian abscesses." Dr. Simpson does not, however, mention whether his diagnosis was confirmed by a post-mortem examination.

Dr. Churchill, in his valuable contribution on inflammation and abscess of the uterine appendages, (*Dublin Journal*, vol. xxiv. page 23,) states that the escape of pus into the peritonæum, where it gives rise to peritonitis, is always alarming, but not always fatal; and he refers to three of the cases he has detailed, but which do not seem to prove his position, for in these cases there is no evidence of effusion of the pus into the peritonæum having taken place. The fatal results of purulent

effusion into the peritonæum do not depend on the amount of pus effused, but on the irritating nature of the fluid; and here we will remark how very different is the prognosis in cases of rupture of ovarian cysts, with effusion of their contents into the peritonæum, provided they contain only a bland albuminous fluid. We believe we were the first to establish, by a statistical table, the innocuity of this accident, in our papers on the treatment of ovarian dropsy, (*Lancet*, August, 1848.)

With respect to hæmorrhage from the ovaries producing peritonitis, we think this has occurred from pressure on the softened and highly vascular stroma, where post-mortem examinations display shreds of the ovaries mingled with sanious pus in the abdominal cavity.

As an example of acute peritonitis from rupture of a tubal cyst, we extract from the *Journal Hebdomadaire* (tom. i. p. 114) a case published by M. Dalmas, wherein this form of disease most probably followed ovaritis. This case will be found highly interesting for other reasons.

Case 22.—Mary Dustenil, aged thirty-seven, the mother of three children, the youngest of whom was seventeen years of age, entered La Charité on the 2nd of September, 1828, having always enjoyed good health until the previous six months. She first complained of constipation, with pain

in the right iliac region; afterwards of darting pains in the right thigh, and sickness and colicky pains soon followed.

In the previous month of August, she had felt pain in the left iliac region, and was conscious of a tumour rising from that spot, causing a painful numbness on the corresponding side. M. Andral distinctly felt the tumour, about the size of an apple, and painful on pressure, and he considered it to be ovarian. The left limb was weak, particularly on walking: vomiting and colic came on every day, at irregular intervals. M. Andral applied twenty leeches over the tumour, at three different times. On the 6th and 7th of September, the catamenia appeared, and on their appearance the vomiting and constipation ceased. These symptoms, however, returned, the pain in the right thigh re-appeared, and on the 29th of September the catamenia again began to flow. The patient became worse, diarrhœa supervened, her weakness increased, and on the 9th of October she died.

At the post-mortem examination, considerable purulent effusion, and false membranes, were found in the abdomen. To the left was a tumour, intimately connected with the rectum, which, on being opened, showed a circular perforation, about as large as a goose-quill, communicating with the tumour; this, on pressure, became more evident, for pus was seen to pass from the tumour into the rectum. It was afterwards found that this tumour

was nothing more than the Fallopian tube, considerably dilated, inflamed, and in a state of suppuration. That portion of the tube which still retained its ordinary appearance, did not communicate with the interior of the tumour by a small aperture, but by a funnel-shaped prolongation of the tube. Behind this was a smaller tumour, which proved, by its fibrous coat and general appearance, to be the ovary. It also contained pus, but there was no communication between the purulent cavities. On the right of the uterus, an inverse disposition was observed. The right ovary, which formed the principal part of the tumour, was about the size of a hen's egg, and full of thick green pus. The right Fallopian tube was also gradually increased in size, and from the uterus to its extremity was inflamed, and contained pus; but the womb and the bladder were perfectly healthy.

This case is suggestive of many reflections. First the right and then the left ovary became subject to an inflammation, which was transmitted to the Fallopian tubes; but no cause can be ascribed for the inflammation of the ovaries. Menstruation was deranged, and then suppressed; but, when the ovaries and Fallopian tubes were already in an advanced state of disorganization, how was it that the menstrual flow appeared twice previous to the patient's death? It proves that, when a hæmorrhagic habit has been set up in woman by menstrua-

tion, then, in the absence even of the accustomed ovarian stimulus, the flow of blood may again appear. Has not this also been observed in man, when subject to periodical hæmorrhoidal discharges, or other hæmorrhages?

But this observation no more proves that the uterus is the seat and organ of menstruation, than that the flowing of blood at the monthly return from an ulcer, shows that diseased surface to be the cause of menstruation. Dr. Pauly relates the case of a woman who presented an accidental and complete occlusion of the vagina, the consequence of a laborious confinement. She was two months at the hospital, during which time she menstruated twice, with violent pains resembling those of metro-peritonitis. At both epochs she was examined with the speculum, and it was easy to see the blood perspiring from the whole vaginal cavity.

We have thus seen that collections of pus in the Fallopian tubes may burst, and pour their contents into the peritonæal cavity, or into the womb and adjacent organs; the pus may likewise be effused into the sub-peritonæal cellular tissue of the broad ligaments, and then travel to a great distance.

Death may be caused by the passage of the menstrual discharge into the peritonæal cavity; and when this has taken place to any considerable amount, it may occur before inflammation has had time to be set up. The blood may be poured out

from the free openings of the Fallopian tubes, or it may make its way into the peritonæum through the ruptured tubes; and this may occur during menstruation,* or at any other time. We shall briefly enumerate some cases of the first description.

Case 23.—Mr. Barlow (*Lond. Med. Gaz.*, vol. xxv.) mentions the sudden death of a patient during an attack of purpura hæmorrhagia, which occurred five days after a miscarriage of a six months' fœtus. On opening the body, blood was found in the abdomen, without any rupture of the tubes; it was evident that blood had been outpoured from the Fal-

* Our notions of menstruation are as restricted as our notions respecting the diseases of the reproductive organs. It is generally admitted that the uterus is the sole organ of menstruation, whereas menstrual blood can be secreted from the whole extent of the generative intestine, from the *matrix superior* to the uterus and vagina. In most of the cases wherein it has been possible to open the bodies of women who have died while menstruating, blood has been found in the oviducts. We have been enabled, through the kindness of Dr. Hutchinson, to lay before the reader Dr. Paget's report on the organs of generation of a too notorious woman. The report not only gives an additional proof of this fact, but it also gives evidence of well-formed vesicles without ova, of a perfect corpus luteum in a barren woman, and of menstruation without ovulation.

"Mrs. M—— had begun to menstruate about twelve hours before her execution. The ovaries were of moderate size, and presented numerous marks of cicatrices, with some small bands and threads of false membranes on their surfaces. In the right ovary, three Graaffian vesicles projected slightly

lopian tubes, for small coagula still projected from their orifice.

Madame Boivin relates a case in point.

Case 24.—A woman, after a recent abortion, at an early period was affected with inflammation of the uterus and of the peritonæum, of which she died. The ovarian extremity of the left Fallopian tube was of the size of a small hen's egg, and adhered to the ovarium, which it almost surrounded; it was red, very vascular, and contained some fluid blood; the parietes of this sac were half-a-line in thickness; the right Fallopian tube was obliterated at its dilated

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on the surface and looked healthy, containing clear serous fluid. A fourth was of very large size, about 3′′′ in diameter, and prominent. In the left ovary, one Graaffian vesicle was fully developed and prominent. We looked for ova in the contents of all these, but in vain. The surface of the ovaries was generally rather more than usually vascular, but there was no peculiarly vascular spot, nor any appearance of the recent rupture of a vesicle, or the discharge of an ovum. In the right ovary, near the surface, was a small cyst or cavity, containing what looked like a decolorized clot, and bounded by a thin layer of bright yellow ochre substance—an excellent example of a fibro-corpus-luteum of one or more months' date, certainly not more recent. The veins at the lower part of the ovary were large and turgid. The ovarian ends of both tubes were completely closed. Tracing the tubes from the uterus, they proceeded for about two inches naturally, and I think both pervious. They then began to dilate and to grow thinner, and thus gradually dilating, they ended in pyriform enlargements, completely closed in, presenting no trace of orifice or of fimbriæ, and not attached to the ovaries, except by some inter-

extremity, which was as large as the finger, without fimbriæ, and adherent to the ovarium by some cellular adhesions; some fluid blood was found within it; the remains of a small lacerated serous cyst were suspended from the ovary on the same side.

Case 25.—The late Mr. John Shaw examined a young lady, who while in full health, was suddenly seized with menorrhagia, accompanied by a succession of fainting fits, under which she succumbed. A large mass of coagula was found in the abdomen, but the source of the hæmorrhage was a mystery, until the Fallopian tubes were laid open, and then

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vening tissue. Each of the enlarged saccular ends of the tubes measured about 1″ by ½″ and its walls were thin, and lined with mucous membrane, which had a ciliary epithelium. They were filled with thick, grumous-looking, and ropy claret-coloured blood, with well-formed blood-corpuscles, all like those of recent blood, and including a very large proportion of white ones, some of which were very large, and contained numerous granules. This blood could be pressed along the tubes to the uterus; but the tubes appeared to have contained none, except at their dilated ends. The blood did not coagulate, and no serum separated from it. The uterus was large, especially at its cervix, which appeared swollen. The os uteri was circular. The walls of the uterus were thick and soft, and their out-surface, about the fundus, had a partially lived hue. The cavity of the uterus was nearly full of black fluid blood, containing well-formed corpuscles, with an ordinary proportion of white ones. In this blood was a small round mass of soft white flocculent substance, about 1″ in diameter, like decidua. It appeared to be formed entirely of cells, like lymph, in

tubes were laid open, and then it was discovered that, for the space of about an inch and a half of one of them, its lining membrane was pointed with bloody spots, from which the fluid found in the peritonæum had been rapidly poured out.

Case 26.—Mr. Field, of Stanhope-terrace, has mentioned to us the case of a lady who, while pregnant, took fright; she died soon after, and it was found that both the womb and one of the oviducts had been ruptured, but in such a way that the peritonæal membrane remained *intact*, therefore the blood which was found in the abdomen must have come from the tubal openings.

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various degrees elongated and attenuated, as in the development of filaments of cellular tissues. They are just like those of the deeper layers of granulations, only smaller. The mucous membrane of the uterus appeared pale, but healthy. False membranes were attached to many parts of its fundus.

"The closure of these Fallopian tubes accounts for the woman being barren, though married, and having, it was believed, had frequent intercourse with others besides her husband. (I afterwards learned that she was a woman of extreme sexual passion.)

"It would seem probable that in menstruation blood may sometimes flow from the vessels of the tubes as well as from those of the uterus. Certainly the blood in these tubes did not pass into them from the uterus; for 1stly, there was none in them, except at their dilated ends; 2ndly, what they contained differed from that in the uterus, in being thick, grumous, and claret-coloured, while that in the uterus was like common venous blood, and contained a larger proportion of white corpuscles."

Rokitansky has twice seen this hæmorrhage from the tubes in women affected with typhus fever, one of whom was pregnant. The same circumstance was noticed at the Hotel Dieu of Paris, in several instances during the epidemic puerperal fever of 1746.

It is singular that in all these cases the observers do not seem to have ascertained whether there existed any obliteration of the uterine extremities of the oviducts. It appears, then, that this occurrence has been principally observed in the puerperal state, in abortion, or connected with metro-peritonitis. That this tubal hæmorrhage is not always fatal is rendered probable by the frequent recovery of patients from abdominl wounds, in which blood has been effused into the abdomen; those fibrous bodies which are sometimes found in the peritonæal cavity of women would be thus satisfactorily explained, their origin being accounted for in the same manner as the fibrous articular bodies, to which Professor Velpeau has justly ascribed an hæmatic origin.

But in other cases the effusion of blood into the peritonæum is the result of tubal rupture, and this takes place subsequently to an obliteration of either the uterine or free ends of the oviducts.

The obliteration of the abdominal extremity of the oviduct, accompanied by the total destruction of the fimbriæ, is a frequent occurrence, pointing

evidently to an antecedent inflammation as its cause, and exemplifying once more that admirable providence by which the Divine Architect sustains our marvellous edifice of flesh and blood. Anatomists have wondered at those two points of the human frame, whereby alone the mucous and serous membranes meet, blend, and freely communicate; they have wondered that the functions of the two distinct membranous surfaces do not interfere with each other in the healthy state; but as pathologists we must admire the intervention of Nature to stop all communication between the two membranes, when by the inflammation of the Fallopian tubes pus might flow into the peritonæum, and thus produce peritonitis.

The obliteration of the uterine extremity of the tube is the result of inflammation, and fortunately is not of frequent occurrence, for it also causes peritonitis by hindering the menstruul secretion of the Fallopian tube from finding its way to the womb. It produces the retention of the ovum, and the menstrual discharge, accompanied by pain, and slight tension in the iliac regions—symptoms which are observed in some cases of amenorrhœa. It sometimes does occur, however, that the amount of fluid by which the inflamed oviduct is distended is sufficient to cause its bursting.

The oviduct may be obliterated at both its extremities, and its inflamed surface may be dis-

tended with pus or blood, forming a tumour, which cannot be distinguished from an ovarian abscess, and which, like an ovarian abscess, has been known to empty itself by an opening through the abdominal parietes, or into the peritonæal cavity. De Haen (*Ratio Medendi*), Heyfelder (*Rust's Handbook of Surgery*), W. Monck (*Lond. Med. Gaz.*, 1841), Orde (*Lond. Med. and Surgical Journal*, 1834), W. Adams (*Amer. Journal of Science*, 1826), relate such cases; others may be found in *Actes des Erudits de Leipsick*, anno 1693; in Ruysch's *Observationes Anatomico-Pathologicæ;* and one in *Hufeland's Journal*, Nov. 1819.

We have condensed several cases of this description, which are too interesting to be merely enumerated, and which have a practical import that has hitherto been completely overlooked. The first is taken from Dr. Bernutz's interesting Memoirs on Retention of the Menstrual Flow, (*Arch. Gén. de Méd.*, June, 1848,) and it well exemplifies the mechanism of this termination, and the steps by which it may lead to death.

Case 27.—A woman, forty years of age, having regularly menstruated, had been pregnant seven times, but twice only carried her child the full period. Her last confinement was unfavourable, for it was found necessary to turn the child. Without any apparent cause, suppression of the menses took place, and the patient suffered much

from abdominal pains. In the following month there was a re-occurrence of the pelvic pains without any menstrual discharge. Leeches to the fundament were ordered, and blisters to the ovarian region; and while the patient was in a warm bath, she passed a clot of blood, sufficiently well organized to be called by her a piece of skin. This was followed by a slight but continued flow of blood, which afforded considerable relief. Tension and swelling existed in both ovarian regions, and when they were pressed upon, the pains were compared by the patient to those of the last stage of paturition. Micturition was painful, and there were also constipation, and tenesmus when the bowels acted.

These symptoms had been somewhat subdued, when she was suddenly seized with intense pain, first felt in the lower part of the pelvis, but afterwards radiating to the whole of the abdomen, with continued vomiting; the pulse was small and frequent. Notwithstanding the application of ninety leeches to the abdomen, the patient soon sank, and on a post-mortem examination, traces of chronic peritonitis were found, such as the slate colour of the parietal peritonæum and melanotic tint of some of the intestines. The abdominal viscera were also found in a state of recent agglutination, and when separated, the intervals between them contained a brownish-red sanious

liquid. The walls of the uterus were three times their usual thickness, and its cavity contained about an ounce of red blood. The right ovarian tumour was about the size of a hen's egg, and of a brownish red colour. When opened, its cavity was found to communicate with that of the uterus by a permeable oviduct, containing a red clot in its uterine extremity, and a mixture of pus and blood in the rest of its dilated extent.

The tumour was formed by the enlargement of the ovarian extremity of the oviduct, the fringed border of which embraced the ovarium, and was so firmly agglutinated to it, that the cyst was ruptured on attempting to separate the one from the other. The left tumour was about the size of a turkey's egg, covered with well-organized false membranes of a pale red tint. This tumour was formed in the same way by the dilatation of the ovarian extremity of the oviduct, which was also permeable in its whole extent. The fimbriæ of the left oviduct, however, only composed a part of the walls of the cyst, and uniting with the false membranes adhered to the ovary and to part of the broad ligaments, thus forming the cyst. It was not possible to find in its walls an aperture through which the blood could have passed from it into the abdomen. In the pelvic cavity was found the sanious brick-dust-coloured fluid previously alluded to, and on removing this, a solid clot was

found, three inches in diameter; beneath it was a substance which, from its colour, texture, and density, was more like cartilage than anything else. It was not possible to distinguish the peritonæum, which had given rise to it. Neither could we discover traces of bloodvessels in this accidental production. In the pelvic cavity no ruptured bloodvessel was found, to account for the presence of the blood.

The phenomena of this case may be summed up in the following manner:—

1. Retention of menstruation.

2. Repletion of the uterine cavity and Fallopian tubes.

3. Distention of the tumour in the ovarian region, and rupture of the left tumour. Passage of blood into the peritonæum causing chronic peritonitis, of which the proofs were found, on opening the body.

4. Expulsion of a portion of the retained blood, and improvement of the patient's health.

5. Renewed distention of the ovarian tumour, rupture of the cyst, passage of blood, peritonitis, and death. The means by which the blood passed from the cyst to the pelvis could not be detected, but as no aperture could be found which would explain its arrival there, we may, with Dr. Bernutz, fairly infer that the opening was hidden by recent pseudo-membranes.

Another instance is recorded by Professor Switzer:—

Case 28.—Anne C. G.——, aged thirty-seven, the wife of an innkeeper, was robust and active from her childhood. She was the mother of six children; all of whom she nursed; nothing abnormal took place at any of her confinements. Her last child was born two years previously, and since that event she had menstruated regularly.

On Thursday, Oct. 9th, 1844, Mr. Woldbye was called to her, when he found her suffering pains in the loins, extending down to the pubes. The lower part of the abdomen, especially the left hypogastric region, was very tender on pressure. The pulse was 90, the tongue foul, and the head ached; she had a stool that day, for fourteen days she had been expecting to menstruate; antispasmodics were fruitlessly administered; fomentations and leeches were also applied, without success. On the day following, that when I was called in, the lower part of the belly was swollen, and so tender as not to admit of pressure. She had restlessness, vomiting, and other alarming symptoms; the pulse rose to 130. The treatment consisted chiefly in bleeding, and the administration of calomel, and occasionally anodyne enemata. At one time the symptoms became milder: this was after she had taken twenty grains of calomel. She died on the 20th of October.

Autopsy.—On the following day the abdomen was opened. The peritonæal covering of the womb and intestines was strongly injected with blood, and here and there upon it were to be seen small, blackish, melanotic-like spots. All the intestines were dark-coloured, and much distended. Their mucous surface was in many places thickened, and covered with ulcers, roundish in form, and deep in the centre. Towards the left iliac region existed a large coagulum of extravasated blood. The sanguineous mass filled the pelvis, covered part of the descending colon, and had the uterus embedded in it. The blood having been cleared away the uterus was cut out, with its ligaments, &c. attached. It was found that this organ was of the average size which it possesses in women who have borne several children. The ovary, Fallopian tube, and round ligament of the uterus on the right side were normal. The left half of the uterus, with the parts attached to it, were larger and more distended than those on the right side, and the ovary and Fallopian tube lay somewhat lower than on the right side. This ovary was less than its fellow, and uneven on its outer surface. The round ligament was normal. The Fallopian tube bulged out at its middle to the size of a walnut. A careful search having been made for the origin of this hæmorrhage, it was traced to *a gap in the left Fallopian tube.* A probe introduced at its fimbriated extremity passed into the coagu-

lum, but it could not be passed up into the tube from the corner of the uterus. When the examination had proceeded thus far, the uterus was divided longitudinally, the whole of the mucous membrane and *arbor vitæ* were found to be unaltered. *A layer of lymph-like substance, of about the thickness of the pleura, lined the cavity itself.*"

In his remarks on this case the learned Professor labours hard to prove that this was a case of tubal pregnancy; but the existence of a cavity in a sanguineous mass found in the oviduct, no more proves that it was a product of conception than do similar cavities, when found in polypi of the heart or arteries, prove them to be likewise the product of conception. Admitting, however, that the periodical disengagement of an ovum was partly the cause of this fatal termination, its principal explanation is to be found in the obliteration of the uterine extremity of the Fallopian tube, and the retention of the menstrual secretion; for although the blood found an outlet by the abdominal opening of the tube, its texture was so much softened by inflammation in one portion that it probably burst from over-distention.

In the *Magazin für die gesammte Heilkunde von Rust, Berlin*, 1836, a similar case is related where the tumour was likewise in the middle of the tube, and burst towards the upper side. In the delineation, the ovulum, which is not described in the text, appeared rough on the outside, and with a smooth membrane on the inside.

In the *Neue Zeitschrift für Geburtskunde*, 2 band, *Berlin*, 1835, a report is to be found of a case observed by D. Jacobson, in Kœnigsberg, which has much resemblance to this; only *a mole lay in the ostium abdominale tubæ Fallopii, so that a part hung down in the lower part of the belly, while a part was in the tube.* On making an incision into the tumour itself, there was seen in the inside a fine transparent smooth membrane, which was filled with coagulated blood that lay in rows. No trace of a fœtus, however, was discovered.

In mentioning these cases, we do not wish to assume the frequency of their occurrence, but to show that from the evident mechanism of these extreme examples something similar does no doubt often occur, so as to cause more or less intense symptoms of local peritonitis in the iliac region—a fact to which we shall again refer.

In the following case, extracted from Dr. Pauly's work on "*Diseases of the Uterus*," similar phenomena were observed, and were the consequence of an operation which, like ovariotomy, has for a time given unconfirmed hopes of a useful application:—

Case 29.—Madame F. T. suffered much when first menstruating. She was married at fifteen and a half, and soon became pregnant. After her confinement, her menstruation was irregular; she was subject to a leucorrhœal discharge, which, in a few years, acquired irritating properties: metror-

rhagia also supervened. Alarmed at her state of health, she sought medical advice, and at the neck of the womb was found a tumour about the size of a pigeon's egg. Removal of the neck of the womb being judged necessary, it was performed in presence of Lisfranc. The operation was tedious; plugging was necessary; but there were no very serious consequences. The wound healed with great rapidity, and forty days after the operation the patient menstruated, but it was utterly impossible to find the orifice of the uterus. She, however, recovered her health, and for two years and a half menstruated regularly, though the discharge was less abundant than it should have been; but from that time the quantity of the menstrual fluid was considerably diminished, and she suffered much pain. In the September of the fourth year after the operation, the catamenia did not appear; but symptoms of peritonitis, with an inflammatory swelling of the right iliac region, took place. These symptoms abated, under the influence of an energetic antiphlogistic treatment, and the patient passed the months of November and December in tolerable health; but the menstrual flow continued absent, in spite of a constant recurrence of the symptoms at each menstrual period, and of the means by which its appearance was solicited. In the following January, the peritonæal symptoms increased; a manifest swelling appeared in the

right iliac region; and the patient suffered from dyspepsia. She remained in this state all February, when the swelling became more painful. Diarrhœa continued, and fever carried her off in the following June. The post-mortem examination was made in presence of Drs. Carron du Villars, Duperlet, and Pauly.

The vaginal canal, on being opened, was found to end in a cul-de-sac, formed by the solid fibrous tissue of a cicatrix. The uterine orifice was completely obliterated; the iliac fossa was filled by a tumour containing in its centre a substance resembling tuberculous matter, though no tubercles were found in the lungs or in any other organ. It is to be regretted that no sort of information is given respecting the uterus, the oviducts, or the ovaries; but the previous case gives us the means of understanding the one we have just detailed. Notwithstanding the obliteration of the mouth of the uterus by the operation, for two years afterwards a menstrual flow, though in a diminished quantity, was regularly secreted. Its diminution was accompanied by dysmenorrhagic pains, and its suppression and effusion in the vicinity of the abdominal opening of the oviduct, by a painful swelling in the iliac region. At every recurrence of the menstrual period, an additional quantity of blood was extravasated, causing the aggravation of the local peritonitis.

After carefully perusing this case, the question naturally arises—Do not similar phenomena often occur, though to a less extent? Admitting even the infallibility of that species of instinctive motion, by which the oviduct (when free) always applies its fimbriated extremity to that portion of the ovary where its services are required, we know that both oviducts are often bound down so as not to be able to perform this office, that the fimbriæ are often destroyed, and the abdominal opening of the tube is frequently obliterated. In these cases the ovum and the fluids which accompany it must fall into the peritonæal cavity. Will not this partly explain some of the symptoms by which menstruation is sometimes attended—symptoms similar to those of local peritonitis? Indeed, we believe that the previous cases explain the phenomena of those numerous instances of dysmenorrhœa caused by a congenital or inflammatory partial closure of the os uteri, and attended by such intense pain in the lower part of the abdomen. The menstrual blood, not finding a free exit by the os uteri, distends the Fallopian tubes, and is poured into the peritonæal cavity. Great credit is due to Dr. Simpson for having lain so much stress on the necessity of dilating the neck of the womb by sponge bougies in these cases; for, when once a free passage for the menstrual secretion is effected, menstruation is no longer intensely painful. Can we not in the

above way account for those serous cysts, or sanguineous tumours, which we sometimes find in the pelvic cavity, and for the origin of which we cannot otherwise account?

In Mr. Monk's case, the rupture of the oviduct did not occur till eighteen months after the first appearance of pelvic distention from retained menstrual fluid, and the Fallopian tubes were sufficiently enlarged to admit the finger; this shows that these cases may last much longer than would be at first admitted, and we believe that to less intense, but similar phenomena, the name Dysmenorrhœa is often given.

CHAPTER IX.

TREATMENT OF ACUTE OVARITIS.

The plan of treatment already recommended for sub-acute ovaritis, is also applicable, at the outset, to the acute form—that is to say, the main plan of attack will remain the same, though some of the measures recommended will require to be carried out with a greater degree of energy. On the continent, and particularly in France and Italy, it is the common practice to combat the high fever which accompanies the local symptoms by one or more venesections. The veins of the arms are those chosen to relieve the circulating system, according to the old and not to be despised doctrine of derivation. The circulating stream has set in towards the pelvic organs, and affords an increased amount of materials to those which are diseased, and by bleeding from the arm, it is intended to divert this habitual and dangerous current, and to determine another flow of blood from the pelvic organs to the arms and superior portion of the

body. The local symptoms are relieved by the repeated application of leeches. This was also our practice in England some thirty years back, and torrents of blood flowed at all our public institutions. Now, however, venesection is but seldom practised, even in cases of acute rheumatism, or equally severe inflammation, and we cannot help thinking that the change is an improvement, for the administration of calomel and opium equally abates inflammation, while it economizes the patient's strength, shortens convalescence, by leaving within the frame the *liquid flesh*, as Bordeu used to call the blood,—that immediate pabulum of all the organs of the human body. We therefore prescribe, for the general symptoms, doses of two or three grains of calomel, with or without the tenth of a grain of opium, every second or third hour. Instead of eight or ten leeches to the seat of the disorder, it will be necessary to apply from fifteen to twenty, and, if necessary, to repeat their application over the tumour. We must not, however, suppose that by this means we can always arrest the subjacent inflammation, for, in one of Montault's cases, a spontaneous opening took place through the skin, notwithstanding two hundred leeches had been at different times applied over the tumour. When the bleeding has ceased, we annoint the ovarian region with two drachms of the compound mercurial ointment, applying immedi-

ately afterwards, and over the mercurial ointment, a large linseed-meal poultice. Blisters in this stage of the complaint would but uselessly increase the patient's suffering. Medicated clysters, so strongly recommended in sub-acute ovaritis, are also advantageous, but they sometimes entail so much pain from the necessary movements of the patient, that they frequently cannot be administered. These means should be persisted in, so that the progress of suppuration may be arrested, and resolution attempted, even when fluctuation is manifest, as in the case which occurred in the practice of Dr. Martin Solon. The following is another instance of this uncommon occurrence:—

Case 30.—Madeleine ——, aged twenty-two, had always enjoyed good health till the age of seventeen. From that period she was continually ailing, and constantly complained of a feeling of oppression and difficulty of breathing, which became aggravated every month. Her catamenial periods were always preceded by considerable pain in the lumbar region, twitches in the thighs, weight in the hypogastrium, and colic. She was habitually constipated. In 1840, without any known cause, she was seized with symptoms of inflammation in the abdomen, which, if we may judge by the description of a non-medical person, must have been those of peritonitis. The first time she

was seen on the 24th of October, 1842. For two days she had been suffering from severe pain in the under part of the abdomen, with a feeling of weight in the groins, and twitches in the thighs and loins. The catamenia had appeared twenty-six or twenty-eight days previously. The face was flushed; skin hot, but moist; the pulse, somewhat fuller than natural, was 80. She complained of severe headach, difficulty in breathing, and on the previous evening she had remarked that her sputa were tinged with blood. No stool for the last forty-eight hours. The abdomen was painful on pressure over its whole extent, but more especially at the left iliac region, where there was a small tumour, apparently of the size of a hen's egg; it was somewhat moveable, and very painful to the touch. On examining the chest, pulmonary engorgement of the right side was discovered, and this was probably occasioned by the presence of tubercles; the left side, however, was healthy. The patient was copiously bled from the arm; fifteen leeches were applied to the groins; foot-baths, with vinegar, were employed; demulcents, and slightly purgative enemata, were likewise ordered. Under the influence of this antiphlogistic treatment, the headach and difficulty of breathing were much relieved; but what is especially remarkable, the catamenia appeared next day, and continued for three days in much larger quan-

tity than usual. On the fourth day, the swelling of the left iliac region began to diminish, and from that period the patient was completely convalescent. She now continued well till the month of June of the following year, the appearance of the catamenia, however, being always preceded by pains in the bowels. I was then requested to see my patient a second time, and found her in a state so completely similar to that which I have already detailed, that I need not repeat the description. The same treatment was pursued with the like happy results. (A. Chereau, M.D., *Mémoires sur les Maladies des Ovaires.*)

When there exists an inflammatory ovarian tumour, which, however, manifests no opening outwardly or inwardly, it is fair to try such resolutive ointments as have been recommended by practitioners. Thus Jahn employed an ointment composed of ung. dydrarg. 2 oz., potass. iodid., 3 drachms, in a case which had lasted seven years (?), and was accompanied by amenorrhea; there were two swellings; one disappeared, the other was much reduced.

Dr. Rigby has used the tartar-emetic ointment, rubbed into the inguinal regions, so as to produce sloughing. He regrets the general symptoms, nausea, &c., which the remedy produces, but we consider them to be accessory to the cure, and we are confirmed in our views by the success which

attended the exhibition of the same remedy, in a case related by Horst. Sal. ammon., 1 oz., tart. stib., 1 gr., decoct. taraxaci, 1 pint. He gave half a cupful every hour.

Sadler (Meissner, *Treatise of Diseases of Women and Children*) applied a moxa over the ovarian tumour, and repeated it five days afterwards, which considerably diminished the size of the tumour, and was so far useful as to enable it to withstand the impetus of menstruation.

We have already seen that the resolution of ovarian abscesses is of rare occurrence, and have pointed out the roads by which the pus escapes, showing, at the same time, that the most frequent and least dangerous mode of elimination of the pus is through the vagina. From the observation of this fact to our attempting to imitate the process by which Nature has often brought about a cure, there should be but one step. Practitioners of former times were obliged to found their diagnosis of pelvic tumours on rational symptoms only, as they were not possessed of those improved modes of exploring the deep-seated abdominal viscera which we have carefully detailed; and therefore they were prepared to let these tumours take their own course, and open spontaneously, which, we must allow, was sometimes done with impunity, even after the prolonged retention of pus in the system. Thus, Lassus relates

the case of a woman, who for several years had a hard, voluminous tumour in the abdomen. The abdominal pains became excessive, and the patient's death was supposed to be imminent, when she suddenly voided a great quantity of pus through the vagina. The pain vanished, the abdomen returned to its natural size, and the patient was soon restored to health.—(*Lassus, Path. Chir.*, t. i. p. 138.) Marjolin also describes a perfectly similar case.—(*Dict. de Méd.*, Art. Kyste.)

The thickness of the parietes of the abscess may be such as to delay its spontaneous opening for a long time. It may thus acquire a large size, and predispose the patient to peritonitis, by extension of the inflammation, as well as by the continued presence of a large quantity of pus in the system; there is in such a case a greater chance of its perforating the peritonæum, and causing mortal peritonitis. Even when the perforation fortunately takes place through the skin or a mucous membrane, it will seldom do so until too much mischief has occurred, by extensive inflammation in the adjoining organs and cellular tissue, for the constitution to be benefited by the result; while, at the same time, prolonged sickness, hectic fever, and subsequently protracted suppuration and permanent fistula, reduce the patient to the most frightful state of marasmus. It often happens that the spontaneous opening of the abscess is not

effected in the most favourable situation for voiding the pus, and thus a vitiated fluid is allowed to remain in the cul-de-sac, causing inflammation of the surface of the cyst, which may be followed by symptoms of its absorption. Should the abscess communicate with the bladder or the intestines, the contents of these viscera may penetrate into the ovarian abscess, causing symptoms which are afterwards explained by the post-mortem examination. Thus, in two cases, where matter was found in ovarian tumours, death supervened upon diarrhœa, which had lasted a year, although the causes of its existence were not satisfactorily explained. The issue of the pus may also occur in an intermittent manner; thus Chomel mentions, in his lectures, that two of his patients experienced every two or three months a swelling in the iliac region, and then passed a considerable quantity of pus by the vagina. One had been in this state for two years, the other for eight. If, instead of leaving the opening of pelvic tumours to Nature, the surgeon, as soon as fluctuation becomes manifest, opens them with all due precaution at the place where they point, and whence, consequently, the pus can easily flow, the patient is immediately relieved from the pain arising from the inflammatory distension of the cavity, and from many other dangers which we have already enumerated. Loss of strength being thus

prevented, the patient has a better chance of recovering from the complaint; for it stands to reason that the small incision thus made has a greater tendency to heal than the rugged lips of a spontaneous and ulcerated opening. Chronic inflammation of the neck of the womb, of the vagina, the rectum, and the bladder, the results of the continual passage of pus on the mucous membranes of these parts, is also generally avoided by this artificial opening; no doubt from the tumour collapsing, and its sides speedily adhering, and thus healing without fistula. By opening these tumours in that portion of their extent accessible to the surgeon, we have also the great advantage of being able to inject various liquids into their cavity, whether our object in so doing be to remove the fœtid secretion, or, by keeping them full, to preclude the entrance of air.

If there exist cases where it is quite natural that practitioners should differ in opinion, there are also others where there is no room for dispute; such as where the development of a pelvic tumour does not allow of parturition taking place. Park, Merriman, and Velpeau, have published cases wherein they found it necessary to perform an operation, when the life of both mother and child depended upon it, and the same cogent reasons have determined many eminent practitioners to advise the opening of these tumours as soon as fluctuation becomes

manifest. Bossu and Martin de Bordeaux have successfully followed this plan in circumscribed abscesses of the peritonæum, and Baudelocque looks upon the question as decided in favour of artificial opening of the tumour. Dr. Grizoll, in his paper on abscesses of the fossa iliaca—abscesses much resembling the tumours we are now considering—also decides in favour of an artificial opening. Velpeau, Madame Boivin, and others, are of the same opinion, and Professor Recamier has for many years successfully adopted this plan of treatment, because, in the majority of cases where it is not had recourse to, and pelvic tumours are left to themselves, sudden death is caused by their opening into the peritonæum, or the drain made on the system by interminable fistulæ produces an equally fatal, though perhaps a less speedy result. While following the Paris hospital practice, we have often observed those patients from whom the pus had been voided by the bladder or the rectum, to leave the hospital uncured, after remaining five, six, or seven months there; and a year or two afterwards, we have not unfrequently met these same individuals still suffering from discharges caused by the protracted suppuration of the broad ligaments. In illustration of the fatal consequences resulting from a procrastination of opening the tumour, we may narrate the following case.

Case 31.—A woman, twenty-four years of age, had for a few months been suffering from an affection of the abdomen, supposed by her medical attendant to be cancerous. She was induced to consult M. Guillot, who, in an examination by the vagina, recognised a tumour protruding into that passage, in which he thought he detected fluctuation. So great, however, was the pressure of the tumour on the vagina, that but one finger could be made use of for the exploration, and this could not be introduced higher than to the os uteri, and only a silver sound could be passed between the mucous linings of the vagina owing to the tumour. M. Guillot proposed the vaginal opening of the tumour, but the other medical attendant persisted in considering it cancerous, and in looking upon the obscure fluctuations as that often presented by encephaloid growths. The vaginal puncture was therefore abandoned; the tumour increased in size, and in a few days made its appearance outside of the vulva. It was then easy to detect fluctuation. The tumour was now opened, and gave vent to a great quantity of pus. No hurtful inflammation ensued; the patient nevertheless died, her constitution having been progressively weakened by the protracted and abundant suppuration of the tumour.

This case certainly does not militate against the operation which was performed for its relief; for it was effected too late, and when the local com-

plaint had been allowed to undermine the health of the patient; but no doubt, if an experimental puncture had been made so soon as the tumour became prominent in the vagina, the diagnosis would have been confirmed, and the means of cure might have been devised in time to save life.

In the case of a young woman wherein Professor Velpeau was consulted, manifest fluctuation was perceptible in a pelvic tumour; he proposed the vaginal opening, but the patient would not consent to it. An aperture, however, took place in the iliac region, when a permanent suppuration was established, and caused the death of the patient from marasmus.

When once it is decided that an opening is necessary, the next question naturally arising is, where the opening should be made. The most important point is to study the means adopted by nature, so as to choose the spot where fluctuation is most superficial, and where there is the least chance of wounding the peritonæum, arterial vessels, or any important organ. The opening should also be made, as much as possible, with the view of affording the greatest possible facility for the escape of the pus.

As the vaginal opening of the abscess is the most desirable, we will first treat of this mode of operating, and will preface our observations by

stating that this procedure was not unknown to Paulus Ægineta, and was adopted by Callisen, who mentions it in his "*Systema Chirurgiæ Moderna*," t. ii. p. 59. Towards the end of the last century, it was performed by Macarn, as it has been since by Pelletan, Dupuytren, Alphonse Leroy, Neumann, Lever, Merriman, Roux, Velpeau, Professor Dubois, Nonat, Robert, and Monod, but undoubtedly by Professor Recamier more frequently than by any other surgeon. The arguments we have brought forward in its favour, the successful instances we have adduced, and likewise the example of so many eminent practitioners, will no doubt recommend this operation to the profession, and diminish, if not preclude, the possibility of the patient being left to the uncertainties and dangers of a spontaneous opening of the tumour. In itself the operation is very simple; but as it requires great precaution, we will enter into a few particulars.

In the first place, to avoid dangerous accidents, it is necessary, before operating, to bear fully in mind the relations of the vagina, the rectum, and the bladder, the mode of their connexion, and the disposition of the peritonæum in the pelvis. It is well known that the peritonæum covers a quarter, or sometimes even a third, of the posterior portion of the vagina, being deflected into what is called the recto-vaginal space.

This disposition of the serous membrane would often seem to forbid the opening of the vagina by an incision, or, indeed, by any other means; but when a tumour exists in the cellular tissue of the pelvis, it pushes up this covering. In fact, this occurs every day, when the bladder is distended. The bladder then rises above the symphysis pubis, lifting up the peritonæum, which it drags with it; and thus allows of the possibility of the high operation for the stone, or of puncture above the pubis.

As a similar displacement of the peritonæum occurs whenever a tumour is situated behind the vagina, it is possible to perform an operation on all the posterior portion of this canal without penetrating into the peritonæal cavity. The instances are very rare, where we are not sure of the position of the peritonæum with regard to the tumour; for whenever this latter is very prominent, so as to seem to be one with the vagina, we may fairly infer that it is sub-peritonæal; or even if it be intra-peritonæal, that adhesions exist between it and the serous lining of the recto-vaginal space. Assurance is made doubly sure, if, on percussing the tumour through the vagina, no sensation similar to that of *ballottement* is perceived; and if, on varying the posture of the patient, the relative positions of the vagina and the tumour remain the same.

Before performing the operation, it is also advisable to ascertain the exact position of the uterine arteries, for they are often increased in size in these affections. The great vascular development in ovarian cysts has long been noticed. Dr. Bourdon (to whose valuable papers in the *Revue Médicale* we are much indebted, not only for several cases, but also for his account of the treatment we have often seen employed by Professor Recamier,) has sometimes, in cases of pelvic tumour, felt the pulsation of one or of several arteries in the neighbourhood of the neck of the uterus; and it is easy to understand that their section should be avoided. To perform the operation, the surgeon should make use of a long trocar, or a bistoury, properly protected by linen. Recamier employs an instrument of his own invention, somewhat similar to a pharyngotomist. It consists in a convex bistoury, the point and edge of which may be covered by a silver blade of the same shape, but larger. This silver shield slides on the back of the bistoury, and terminates, at the handle, in a prolongation, by means of which the point and edge of the bistoury may be unmasked to any extent the operator may desire. The patient is placed on her back, with the thighs separated and flexed, and an assistant presses the abdomen with his hands, from above downwards. Professor Recamier then introduces the index of the left hand into the vagina, and determines upon the point

for operating; he then introduces the instrument, which he guides upon the finger, which has not been withdrawn from the vagina. During this time, the blade of the bistoury is protected by the silver sheath, but when he has penetrated to the proper depth, he unsheathes it, and plunges the extremity into the tumour, until he feels the sensation of something having given way, and sees the liquid to which the incision has given vent. This wound, in the shape of a button-hole, is made vertically, to avoid wounding the uterine arteries. The instrument is now again sheathed, and withdrawn with the same precaution, the finger giving all necessary information concerning the extent of the incision, and the thickness and resistance of the parietes of the tumour. If the incision be not found sufficiently potent, then a probe-pointed bistoury is conducted into the vagina, with its flat side laid on the anterior aspect of the finger, when the incision is extended.

The instrument of Professor Recamier is far from being indispensable; for an ordinary straight bistoury, conducted with due care, and of which a part is carefully protected, will do as well. It is of great importance not to plunge the bistoury too deeply into the tumour, for fear of transfixing it, and wounding some subjacent organ. When it is the posterior portion of the vagina through which the incision has been made, it is also pru-

dent to introdnce the finger into the rectum, so as to ascertain, before prolonging it, how far distant the inferior angle of the wound is from the intestine. When the tumour is found to be distended with a thick viscous matter, having no disposition to leave the cavity, it is necessary to inject a sufficient quantity of tepid water into the cyst, to soften and eject its contents. In one of the cases to be presently mentioned, M. Recamier broke down and detached with his finger the coagulated blood which adhered firmly to the internal surface of the cyst. In all instances the pressure on the abdomen is to be carefully continued by graduated compresses, applied to the scrobiculous cordis, under the tight body-bandage, by which means the abdominal viscera are forced down. The following cases will, without doubt, interest the profession :—

Case 32.—A woman, aged thirty-one, entered the Hôtel Dieu on January 22nd, 1840. Her general health was good, and her menstruation regular; but a year and a half previously she had had a miscarriage, from which, however, she soon recovered. Three weeks after this, menstruation appeared, having been delayed for eight days beyond the usual time, and being accompanied by violent pains in the left side of the abdomen. The

menstrual discharge lasted longer than usual, and was excessive.

On the 19th of February, the patient was feverish, and perceived a swelling on the left side of the hypogastrium, attended with lancinating pain, and M. Recamier observed that it stood out in visible relief from the side of the abdomen, extending to the mesial line. This tumour was hard, moveable, and seemed to be so divided as to present two portions, the one, inferior, deep-seated, and situated near the mesial plane; the other, superior, more superficial, and lateral. Vaginal and rectal examination confirmed these characteristic features of the tumour, and permitted the detection of fluctuation in the inferior portion. There was nothing abnormal in the neck of the uterus, but on each side of it the pulsation of a large uterine artery was felt. There were difficulty in passing urine, constipation, pains in the loins, weight in the fundament, pains in the left thigh and groin, fever, and prostration of strength. The bath, poultices, and purgative enemata, were ordered.

On the 28th of February, irregular shiverings appeared, and on a vaginal examination, Professor Recamier found fluctuation behind the neck of the uterus. He made a vertical incision through the posterior wall of the vagina, and at first nothing but blood appeared; but, on the following

days, sanguineous pus was discharged, and the patient was relieved from her suffering.

On the 6th of March fever returned, but without the shivering; and on the 10th, the patient vomited several times. She still complained of pain in the abdomen, though the wound was closed, and no matter could exude.

March 11th.—In a vaginal exploration, while an assistant pressed down the abdomen, Professor Recamier felt a tumour, with evident fluctuation, to the left of that previously opened. He made a second incision, when a great quantity of fœtid pus, mixed with blood, gushed forth. Bath, injections, poultices, to be continued.

In the following days the quantity of pus voided by the wound, the fœtid smell, and size of the tumour, diminished. The patient's strength began to return, and she could take food, but the injections were still continued.

24th.—The opening was completely healed, no traces of the tumour remained, and on the next day the patient left the hospital perfectly cured.

This case is interesting for the following reasons:—The miscarriage had occurred a year and a half previously; no doubt it was the cause of the subsequent ovarian inflammation, shown by the derangement of the menstrual functions. 2. The case exhibits a great precision of diagnosis,

since, by means of different examinations, two tumours were discovered, connected together,—the one, inferior, deep-seated, and approaching the mesial plane, being situated behind the uterus; while the other, or superior, was superficial and lateral, and had its seat in the broad ligament in the neighbourhood of the ovary. 3. Incisions were made into two distinct tumours. The first puncture was made in the central tumour, and did not extend sufficiently deep to reach the collection of matter, but, nevertheless, the pus soon made its way out at the spot where the road had partly been prepared for it, as universally occurs when a portion of the parietes of the containing cavity have been weakened; the deposit escapes from that point. The urine was then passed freely, though constipation continued; but to account for the existence of this symptom, we had an evident reason in the continuance of the lateral tumour, which, descending behind the vagina, pressed on the rectum; for when the second incision was made, a large quantity of pus gushed forth, and constipation ceased. 4. The patient was cured in a month and three days. If these tumours had been left to open spontaneously, how long would the disease have lasted, or would it have been cured at all?

Thus, by the artificial opening, the walls of a tumour have a greater tendency to collapse, and the

tumour itself to retract, and there is a less liability to the introduction of air into its cavity, which is generally followed by the decomposition and fœtidity of the pus. Besides the methodical compression, Professor Recamier attaches great importance to keeping the cyst full of water, and therefore recommends its injection two or three times a day. When performing this little operation, it is necessary to take care not to bring into play the elasticity of the parietes of the cyst, by conducting the injection with very little force. Pillows should also be placed under the nates of the patient, with the intention of keeping, if possible, the opening of the cyst above the level of its fundus. This position, and the compression, should be continued so long as the walls of the tumour are too thick or too dense to remain in contact. When they have acquired sufficient elasticity to follow the water on its retiring from them, the patient may then resume her accustomed position in bed, but the injections should be continued so long as there remains a cavity. Besides other advantages, the repeated introduction of the canula of the syringe prevents the wound from closing before the cavity of the cyst has disappeared, and answers the purpose much better than the catheters we have seen placed in the wound with that intention by some operators, particularly when we consider the great difficulty of keeping these instruments

in their place. If the opening, however, has been made with a trocar, the canula must be left in the wound, for should it be removed before the obliteration of the cavity, it could be replaced only with great difficulty; and it has sometimes occurred, that in trying so to re introduce it into the cyst, it has penetrated the peritonæum. A fatal case of this kind is recorded as having happened at the Hôpital Cochin.

Not to omit minor details, which possess some share of importance, we must state that it is indispensable to push the water to the extremity of the syringe before beginning the injection, and to let it glide along the pulp of the finger previously introduced into the vagina, so as to secure its immediate entrance into the wound without fear of injuring the patient. It is also better not to propel the piston of the syringe with too much force.

Sadler (*loco cit.*) having to treat an abscess of the right ovary about the size of the fist, and finding that it had no tendency to open either by the vagina or rectum, pressed it down with the left hand, and with the right punctured it by means of a curved trocar. Several ounces of pus were voided, and matter continued to flow till the fifth day after the operation, when the wound healed. Abundant diuresis removed a concomitant ascitic effusion.

M. Ricord was equally successful in the following instance :—

Case 33.—A lady, who had never borne children met with an accident, and fell on the sacrum. She suffered for a long time from dull pains in that region ; but these had subsided, and the fall was completely forgotten, when she became affected with a considerable vaginal discharge. M. Ricord ascertained that a quantity of serous fœtid pus, out of all proportion to the size of the uterine cavity, flowed from the neck of the uterus ; and on a more accurate examination, a fluctuating tumour was found to extend from the pubis to the sacro-iliac articulation. On pressing this tumour, the flow of pus from the womb was greatly increased. The abscess was opened through the vagina, and a canula was left in the opening. From that moment pus was no longer passed by the uterus, and after three months the patient recovered. Strange to say, in this instance the menstrual discharge was never interrupted.

In the next case, an incision was not necessary for the evacuation of pus, but it was not attended by any dangerous consequences.

Case 34.—A woman, aged thirty-one, and regularly menstruating, had never borne a child, was almost always subject to leucorrhœa, and

for the last five years had suffered from fever, pains in the abdomen, in the loins, and in the thighs, added to which there were vomiting, and pain on passing urine. Such were her symptoms when she entered the Hôtel Dieu. She had also irregular shiverings, and a great sensibility of the abdomen, particularly in its lower part. By a vaginal examination the os uteri was found healthy, but behind it was felt a globular tumour, as large as a turkey's egg. Though the narrowness of the vagina prevented the introduction of more than one finger, Professor Recamier detected fluctuation, and immediately made an incision through the posterior wall of the vagina, into the centre of the tumour. The opening was small, and a little blood, but no pus, thereupon found vent; but as the bistoury bore traces of pus, it had evidently penetrated into an abscess, which fact was confirmed by the patient (a few hours afterwards, when in the bath) voiding through the opening a considerable quantity of matter. A marked improvement took place during the following days, the secretion of pus diminished, and on the fourth day after the operation, fluctuation could no longer be detected. On the following day the opening was found obliterated, but Professor Recamier thought that he perceived fluctuation on the left side of the tumour, which induced him to make a puncture into its most prominent part;

only a little blood came forth. Pain attended this operation, but no serious accidents, and a fortnight after, on making a vaginal and rectal examination, no tumour could be found, and the patient left the hospital, cured.

Remarks.—This case presents the following points of interest. 1. With regard to the cause of the complaint. It is not difficult to ascribe this to the successive uterine inflammations, giving rise at last to the inflammatory congestion and suppuration of the cellular tissue and the ovary. 2. The error of diagnosis, which prompted Professor Recamier to make an unnecessary puncture in the tumour. This, too, may be accounted for by the impossibility of reaching the latter, as only one finger could be introduced into the vagina; the mobility of the tumour itself must, then, have been mistaken for fluctuation. 4. Though the puncture proved to be unnecessary, this deep scarification of the tumour may have been instrumental in producing its speedy resolution, by the local loss of blood—at all events, it was followed by no serious accidents, and the patient was soon completely convalescent.

The next case will show that sanguineous cysts developed in the pelvis may be confounded with abscesses of the broad ligaments, a mistake little to be regretted, as the same treatment is required.

CASE 35.—A woman, aged twenty-eight, miscarried at an early stage of pregnancy, and for six weeks passed blood by the vagina. An immovable swelling, rising above the pubis, was distinctly perceptible to the touch; and on a vaginal exploration Professor Recamier found a voluminous tumour filling the cavity of the pelvis, pushing back the rectum, and flattening the womb against the pubis. Fluctuation being evident, Professor Recamier made an opening by the vagina, and gave issue to a great quantity of blood; and on introducing the finger into the cyst, it was found necessary to break down some of the adhesions of the clotted blood, and afterwards to remove these clots by injecting tepid water. The patient recovered.

RECTAL OPENING OF THE PELVIC ABSCESS.

We have already explained our reasons for disapproving of this plan of treatment; and we shall now add, that we should only employ it in cases where, after examination, it was found that the abscess was on the point of bursting into that canal, when it would be better to open it at once, instead of allowing any further disorganization of the tissues of the rectum.

OPENING OF THE ABSCESS, BY THE SKIN.

If fluctuation be not perceived in the vagina or in the rectum, but, on the contrary, is found in the hypogastric region, then the aperture must be made in that part of the abdomen towards which the tumour points. It would be highly imprudent to open the abscess without having effected an adhesion between the cyst and the abdominal walls, as we can never be sure that such has already taken place.

Several plans may be adopted for this purpose, all borrowed from the treatment successfully employed in the cure of abscess of the liver; but that most generally followed was first carried into effect by Professor Recamier, and consists in determining the adhesion of the two peritonæal surfaces by the application of Vienna paste (potassa fusa cum calce), previously to puncturing the cyst through the eschar.

M. Martin, of Montpellier, also prefers potassa fusa, and has cured several ovarian abscesses by opening them with this caustic.

The treatment successfully pursued by Drs. Graves and Begin, in abscesses of the liver, might also be adopted in cases of ovarian abscess. Dr. Graves makes an incision of a portion only of the thickness of the abdominal parietes, and then applies linseed-meal poultices over the incision; and the

pus almost always finds an exit where the walls of the tumours have been so weakened. When an opening is once formed, it is important that the free issue of the matter be maintained. As this treatment has been so successful in the cases alluded to, why should it not be equally so in those pelvic abscesses which point towards the skin? But we know not if this plan has received the sanction of experience.

Dr. Begin's mode of treating abscesses of the liver is similar to the preceding, inasmuch as he cuts down on the tumour until he reaches the peritonæum, but without dividing it. He then dresses the wound; and a few days after, when, as the result of inflammation, the parietal peritonæum becomes adherent to that portion of the membrane which covers the abscess, he punctures it, and thus gives issue to the pus. This plan of treatment might also be advantageously employed; but we have seen most of that proposed by Professor Recamier, which we generally adopt, and here describe.

Having decided in what part of the abdomen it is most desirable to effect an opening, a certain quantity of Vienna paste (potassa fusa cum calce, made into a paste with alcohol) is applied to the skin; and when the thickness of the parietes requires more than one application of the caustic, it is better to remove only the central portion of the eschar,

leaving the circumferential portion to protect the cuticle from the action of the caustic. When the seat of fluctuation is nearly reached by the caustic, and adhesions have evidently taken place, as shown by the impossibility of the abdominal parietes sliding over the tumour, an incision is then practised in the centre of the eschar. Injections of tepid water should be made into the abscess, to remove fœtid secretions, and to impede the ingress of air, by keeping the abscess full of fluid.

The following case, reported by Dr. Bourdon, and wherein Professor Recamier employed potassa fusa, instead of Vienna paste, will give a fair idea of the plan we have just been detailing :—

Case 36.—A woman, 20 years of age, entered the Hôtel Dieu, Feb. 1, 1840. Five weeks before, she had been confined of her first child, and she had ever since suffered from pain in the abdomen. She soon discovered that a tumour was forming on the right side of the hypogastric region; she had shivering fits, fever, and vomiting. The patient was pale, with her eyes deeply sunken; she suffered from irregular shiverings during the day, and perspirations at night; the pulse was small and frequent, and there was pain on passing the fæces and urine. By a manual examination of the abdomen, it was easy to discover a hard tumour, about the size of a large apple, in the situation

before mentioned; and on a vaginal exploration, fluctuation was discovered behind the neck and to the right of the body of the uterus. Professor Recamier, not finding any arterial pulsation, made an incision without any further delay. A large quantity of pus was evacuated, and on pressing the abdomen to promote the emptying of the tumour, it was evident that it was flattened. (Injections, baths, poultices.)

During the following days a considerable improvement took place; still the pulse remained frequent, and there was now pain on passing urine, and also pain on the right side of the hypogastric region. The tumour, which had been opened by the vagina, was much reduced both as to size and the amount of its secretion, but there was considerable tension in the right iliac fossa.

Feb. 26th.—A pulsating tumour, causing much pain, was felt in the groin. The pain was much augmented by the slightest movement of the right leg, and particularly by its extension.

27th.—Fluctuation became evident in the tumour, and the vaginal opening was closed. There was a good deal of fever, with abundant nightly perspirations.

29th.—Two fragments of caustic potash were applied on the most salient point of the tumour; on the following day the eschar was divided, and two other fragments of caustic potash were placed in the wound.

March 2nd.—Professor Recamier made an incision in the eschar, and gave issue to a large quantity of fœtid serous pus. This operation greatly relieved the patient, and caused the movements of the lower limbs to be no longer painful. In spite of a slight tendency to diarrhœa, the health of the patient improved; her sleep, appetite, and strength returned, the volume of the tumour decreased, and injections diminished the fœtidity of the pus.

25th.—The fistulous opening of the tumour was closed, the patient had gained flesh, and on the 29th she left the hospital, perfectly well. Since then her health has been uninterruptedly good.

This case gives a fair idea of the phlegmonous tumours which may take place in the broad ligaments, after parturition. Pain and febrile reaction appeared directly after the accouchement, and, a few days after, the patient herself discovered the tumour in the right flank.

It was reasonable to think that a vaginal incision in the lowest part of the tumour would suffice, but fluctuation appearing in another part of the body made another opening necessary. This case, however, certainly tells in favour of the treatment, for, notwithstanding the weakness of the patient, and the severity of the complaint, she was completely cured in two months.

The following case, derived likewise from the practice of the same eminent physician, is most

interesting, with respect to the ætiology of the inflammation of the broad ligaments; and although it terminated fatally, the efficacy of the caustic, in producing the desired adhesions, was satisfactorily proved by a post-mortem examination:—

Case 37.—A female, aged twenty six, was confined, in March, 1841, at the Maternité. Her confinement was natural, but two days afterwards, and before the appearance of the milk fever, she was seized with diarrhœa and violent pains in the hypogastric region. On the sixth day she complained of fever and headache, and was relieved by bleeding. She shortly after left the hospital, but on suffering from shiverings, sickness, and difficulty of passing urine, she entered the Hôtel Dieu on the 3rd of April. The hypogastric region was found very painful, the uterus rising above the pelvis; and on a vaginal examination great pain was experienced when the finger was pressed on the os uteri or the body of the uterus, which was still of the size of a turkey's egg. Pressure on the surrounding parts was also painful. The vagina was hot, and secreted a small quantity of white, inoffensive mucus. A rectal examination confirmed the information previously obtained, and enabled Professor Recamier to ascertain the increased size of the womb, and the healthy state of the broad ligaments. Pulse 100, but not hard.

Treatment.—Ten leeches; cupping on the hypogastric region; baths; poultices.

March 7th.—The fever had abated, and, on examination, the uterus was found to have resumed its proper size, but in the left broad ligament was discovered a round, hard, and painful tumour, of about the size of an apple.

Treatment.—Poultices and mercurial ointment, in frictions, to the corresponding part of the abdominal walls.

Some days after, the patient had shivering fits, lancinating pains, and throbbings in the tumour, which became more and more apparent till the 25th, when fluctuation was manifest through the parietes of the abdomen. As the contents of the tumour did not seem likely to find a vent through the vagina, Professor Recamier decided on giving them issue by an artificial opening through the skin, and a certain portion of Vienna paste was applied to the abdomen, where fluctuation was most palpable.

The next day a second application was made in the same place; and on May 2nd, it became evident that the abdominal parietes did not slide over the tumour as before, proving that adhesion had taken place. An incision was made at the bottom of the eschar, and a glassful and a half of thick, healthy pus was discharged; lint was applied to the lips of

the wound, and the patient was told to keep on her left side.

Some days after, the pus in the cyst became fœtid, and tepid water injections were made into its cavity. On May 10th, scarcely a spoonful of liquid had been injected, when the patient suddenly felt violent pains in the abdomen, and the injections were discontinued. On the same day, fits of shivering occurred; she fainted twice, and experienced all the symptoms of acute peritonitis. These became less violent after the lapse of a few days, and seemed to confine themselves more to the left side of the hypogastric region; but fever, with nocturnal perspirations, continued; violent diarrhœa succeeded; prostration increased; and death carried off the patient two months after she had entered the hospital.

Post-mortem Examination.—The intestines were found adhering together, and to the adjoining viscera, by false membranes. The peritonæum was slate-coloured, and the subjacent cellular tissue was injected. In the peritonæal cavity there was a great quantity of sero-purulent matter, of a green colour, in which floated fragments of false membranes. Among the intestinal folds there were several small collections of pus, circumscribed also by false membranes. One of these collections communicated with the thorax by a perforation of the diaphragm; while another, situated in the

recto-vaginal cul de sac, opened into the rectum. The tumour, which had been opened, was found to be seated in the upper portion of the left broad ligament. It was of the size of an apple, and contained a few spoonfuls of grey pus; its internal surface was also grey, and had the appearance of a mucous membrane. The following were its connexions:—

Its internal surface was applied to the left side of the uterus, and deviated considerably from its usual position, by resting on the recto-vaginal purulent collection. Externally, the tumour was connected with the left iliac fossa, the Fallopian tube, and the left ovary, which was considerably drawn down, of a grey colour, and of a somewhat softened texture. The superior portion of the tumour was in connexion with the peritonæum and the false membranes which covered the investment; and its anterior portion corresponded with the left side of the hypogastric region, and with the serous membrane, being strongly adherent to it all round the eschar. These adhesions were carefully examined, and not the smallest aperture was found in them by which any liquid could have passed.

The posterior portion of the tumour rested on the rectum, to which it partially adhered. It was in this portion of the abscess that the thin ulcerated edges of a perforation were discovered. The perforation was about a quarter of an inch in

diameter, and through it the pus had passed from the abscess to the peritonæum.

This case shows the necessity of making an artificial opening of these tumours in the most dependent portion, for the perforation occurred after an operation had already given issue to the pus: and, as the result of our own experience, we believe that, had it been possible to open the abscess through the vagina, the termination would probably not have been fatal.

It was natural to suppose that peritonitis was caused by the rupture of the adhesions surrounding the eschar, while the surgeon was injecting the abscess, so suddenly did the symptoms follow this operation; but the post-mortem examination showed that it was not so, and that the perforations were the result of an inflammatory action, and would ultimately have caused the patient's death. Without doubt, therefore, the passage of a small quantity of water into the cavity of the irritated peritonæum gave rise to that acute peritonitis which prematurely carried off the patient, and this leads us to establish, as a rule, that no force should be made use of when injecting the cyst.

We must recommend also that the healing of the wound by the closing of the fistulous opening should be left to nature, and that the attendant should not, in any way, attempt to promote its closure. This infirmity may, in some instances,

be considered beneficial for the patient; we have seen accidents similar to those of local peritonitis follow too speedy union in the wound. Faivre saved a patient by keeping the fistula open for three years; and in one instance, a patient, whose life we had thus prolonged for two years, died in consequence of the closing of the fistula, and of the bursting of the distended sac, with effusion of its muco-purulent contents into the peritonæum.

CONCLUSION.

"How does inflammation, by reacting on the ovaries, produce diseases of menstruation?" This was the last of our introductory questions, and if the reader has carefully followed us in our attempts to solve it, he will have seen that in studying the influence of inflammation on the ovaries, and in describing its peculiar characteristics, we have unavoidably detailed those groups of symptoms generally known as *diseases of menstruation*. We think we have successfully shown that these diseases are often the consequence of structural lesions of the ovaries, being in some instances the immediate result of such structural lesions, while in others, subacute ovaritis produces diseases of menstruation by the *induction* of organic lesions in the neck of the womb.

We think that the following practical deductions, from our previous inquiries, express some truths respecting diseases which are as frequent as they have been hitherto little understood.

1. That amenorrhœa is often the result of sub-acute ovaritis, sometimes the result of the uterine engorgement which it determines.

2. That dysmenorrhœa is often the result of morbid ovulation, and often a symptom of ovarian peritonitis. That frequently sub-acute ovaritis, by determining the inflammatory swelling of the neck of the womb, is a mediate cause of dysmenorrhœa; the painful symptoms being, in many instances, produced by the partial closure of the neck of the womb, and the consequent effusion of menstrual secretion into the peritonæum.

Acute ovaritis, which, by some unexplained process, disposes the engorged uterus to let the vital fluid run to waste.

4. That sub-acute ovaritis, by inducing cerebro-spinal reflex action, in certain predisposed subjects, is the most probable cause of hysteria.

We think we have given a sufficient number of cases to illustrate our views. To corroborate them further, would have required a greater space than could be conveniently comprised within the limits of one volume; but if there be truth in what we have advanced, sufficient has been said to put more able observers on the right track; and if we are wrong, the sooner we conclude the better.

We hope, however, that we have not laboured in vain, for even while this work has been going through the press, our convictions relative to the reciprocal influence of ovarian and uterine inflammation have been confirmed by some of those eminent men who have lately thrown light on uterine pathology. Dr. Murphy, Drs. H. Bennet, Tyler Smith, and Sibson, have all acknowledged having met with cases similar to those by which we have supported our views.

We confess that we have been troubled by certain qualms of conscience, lest we should have stepped out of our usual moderation of language in alluding to pessaries and to unwarrantable surgical interference with the uterus. We admit that we have laid ourselves open to a charge of exaggeration, and that, if our prudence had not for once forsaken us, we should have sought shelter under the name of Dr. H. Bennet, who, on this subject, has expressed convictions similar to our own; or we might have invoked even the higher authority of Professor Paul Dubois, who, in a late discussion on uterine diseases in the Academie de Medecine of France, emphatically exposed the folly of the absurd contrivances by which it has been attempted to rectify uterine deviations. Such were our reflections, when we were struck by some strange delineations in a late number of the *Lancet*, (March 9, 1850.)

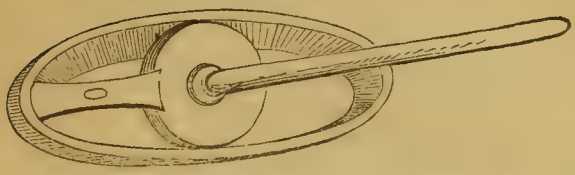
We looked a second time, and we read as follows:

A Description and Delineation of an Extraordinary Machine found in the Vagina.

Sir,—Some time ago, a lady came to London in a wretched state of health. She complained of constant and excruciating pain in the region of the uterus, and there was profuse and offensive discharge from the vagina. The patient stated, that eight months before, she had consulted an accoucheur, who told her that "she was labouring under retroversion of the uterus, and that all her bowels were out of place." Believing that her womb was completely turned topsy-turvy, and that all her viscera were displaced, she consented to have an instrument introduced, which, the accoucheur confidently assured her, would restore everything to its natural position, and would not prevent her from riding on horseback, or even undertaking a voyage to India The introduction of the instrument, she said, caused violent pain, but it was not once removed during eight months, though she had been in a state of constant suffering, had profuse fœtid discharge, with sickness at stomach, and great constitutional disturbance. When an examination was made, the finger came in contact with a foreign body, in the vagina, which was removed, with great difficulty and pain, in a black, half-rotten state. The vagina and uterus were found to be extensively ulcerated.

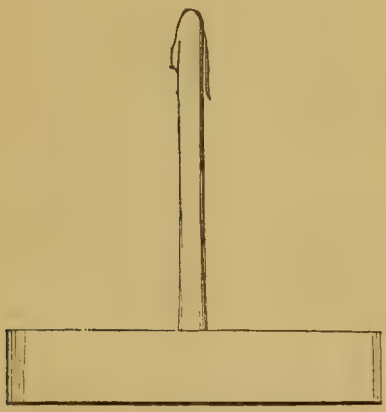
The following is a description and delineation of this extraordinary machine. It consists of a compressed oval ring, of German silver, in a black, corroded state, two inches and a half in length the long diameter, and one inch and a quarter in the short diameter; the perpendicular length or breadth of this ring is half an inch. A blunt style or prong, two inches and a quarter long, about one-eighth of an inch in diameter, is fixed to the inner surface of the ring at one end, by a piece of metal of considerable thickness, which extends to the centre of the ring, and to this the prong is fixed by a hinge, and there is a spring which retains the prong in a perpendicular direction, but which, by touching the spring, may be brought into nearly the same axis as the long diameter of the oval ring.

FIG. 1.



Oblique view of the machine, showing the prong nearly in the same axis with the ring.

FIG. 2.



Front elevation of the machine, showing the prong in a direction perpendicular to the ring.

Several distinguished surgeons and accoucheurs have seen the machine above delineated, and have expressed various opinions respecting it. One thought, from the black, corroded state of the metal, the mass being brittle, with scales separating from it, that it was some strange instrument used by the ancients, which had lain buried many centuries in Herculaneum or Pompeii, or had recently been dug out of the ruins of Nineveh. Another considered it some foreign invention for inducing criminal abortion, and he wished it to be designated "the infernal uterine machine." A third, from the

hidden spring, introduced into its construction, thought it was a man-trap, contrived for the purpose of catching those who were disposed to trespass on their neighbour's premises. A fourth, a very distinguished surgeon, said it must have reference to the mouth, and he had no doubt that it was a gag or instrument of torture. It did not occur to any one that such a heavy ring and prong could ever have been introduced into the uterus and vagina for any lawful purpose.

I am, Sir, your obedient servant,

M. D.

Such, then, are the extraordinary machines which are inconsiderately thrust into the tenderest vitals of the most modest women in Christendom. It is strange that those who profess to be most forcibly struck by the indelicacy of an occular examination of the female organs, should, in general, be the most addicted to subjecting them to the presence of these strange contrivances, which wound alike the feelings and the bodily structure of the victim. And yet we daily boast of the enlightenment of the nineteenth century, of the surprising development of medical knowledge, and of the art of medicine being better practised in England than in other countries?

The case which has so aptly illustrated our assertions occurred in 1850, and in England ! !

THE END.